

Year 9

Booklet 1  
2024/2025

Independent  
Study

Name & LF:



Cabot  
Learning  
Federation

# How to Complete Independent Study

You will have three pieces of IS due every week, which will be checked by your teacher of the subject due.

You teachers will set your IS on Bromcom and tasks for each subject are outlined in this booklet as a reminder.

To complete your independent study you will need this knowledge organiser and your grey, IS exercise book. Most IS is set using this booklet. Maths will be set online in SPARX.

You can access further support or computers in IS Club, which is open every day in LS3 from 3:00pm-3:50pm or every lunch time in G7.

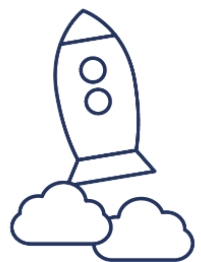


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## Supporting Independent Study Completion



Completed IS is valued by teachers as it extends and supports the learning in lessons as well as embedding independent learning habits. It is rewarded with achievement points.

If students are struggling to complete IS they will be asked to attend a support session after school the following week to address any barriers and ensure the work is completed successfully.

# Tasks

Subject	Year 9 Task
English	<p>Write out your understanding of the definitions and create two different sentences showing your understanding of the word.</p> <p><b>OR</b></p> <p>Create flashcards which display the words and their definitions written in your own words. However, students could also complete the following:</p> <ul style="list-style-type: none"> <li>• <b>Challenge:</b> Complete both the tasks above.</li> <li>• <b>Extra Challenge:</b> Using the template at the end of the booklet, create a Frayer model for one or two of the words. (Etymology= where the word comes from)</li> <li>• <b>Super Challenge:</b> Create a word map. Start with the original word in the middle and add words you associate with that word around it, then words you associate with the secondary words OR write a short story of your choice that includes the key words for the week.</li> </ul>
Maths	<p>You will need to log into your <b>SPARX</b> account to complete your IS. Every student needs to complete 100% of the compulsory tasks and can also complete the XP Boost and Target to support your progress. Write your bookwork codes in your IS exercise book and complete the bookwork checks online. If you get stuck, watch the associated video or check in with your maths teacher before the IS is due.</p>
Science	<p>Complete the worksheet in the knowledge organiser booklet.</p>
Humanities	<p>Complete the questions set on Bromcom. You can request a paper copy of the questions from your teacher if needed.</p>
Computing	<p>Using the knowledge organiser please write 10-15 high quality questions and answers. Write them in the style of the nibble questions. Use the command words state, define, describe, explain etc. Do not include any yes/no or true/false questions.</p>
DT	<p><b>For Design Tech</b>, please draw the 3D (isometric) shape in the space provided on the sheet. keep to the lines, use a RULER and a PENCIL.</p> <p><b>For Food Tech</b>, use the eat well plate to construct 10 knowledge recall questions.</p>
MFL	<p>You will have been given an IS sheet by your teacher in lesson. You need to complete the sheet using your knowledge organiser. If you do not have the sheet, you need to see your teacher before your second lesson this week to get one.</p>
Careers	<p>Your task will be set in <b>UniFrog</b>. You'll find your log in details in an email from UniFrog. You can use UniFrog at any time to find out more about career pathways, post-16, the local and national labour market and to find out more about you and your skills.</p>
Music	<p>Select a Film Composer. Choose one of their works to listen to and make notes on. Write a short paragraph 200-250 words on your findings, including a brief overview of the film composer and the music score. Further details on Bromcom.</p>
Art	<p>Create an A4 presentation on a Graffiti artist. Include a creative title, pictures of their work, facts about them and their work and your opinion of it. Optional: create a copy of one of their artworks. Artist suggestions will be provided before the deadline.</p>
Drama	<p>Find out about the extra-curricular opportunities available within drama and the rest of the performing arts subjects. You can find out more about clubs and performance opportunities in this booklet and from your drama teacher.</p>
PE	<p>Find out more about the extra-curricular opportunities available within PE and performance. Try a range of clubs to explore different sports and activities. There are opportunities to represent your college or Hans Price Academy in a range of teams and event across the year. Find out more from your PE teacher.</p>

# Independent Study Hand-In Schedule

The schedule below shows which pieces of independent study will be due each week. They will be checked by the teacher of the subject due in the lesson that week.

Date	Schedule	
<b>Term 1</b>		
16 <sup>th</sup> Sept '24	English	
	Maths	
	Science	
23 <sup>rd</sup> Sept '24	English	
	Maths	
	MFL	
30 <sup>th</sup> Sept '24	English	
	Maths	
	Humanities	
7 <sup>th</sup> Oct '24	English	
	Maths	
	DT	
14 <sup>th</sup> Oct '24	English	
	Maths	
	Careers	
21 <sup>st</sup> Oct '24	English	
	Maths	
	Science	
<b>Term 2</b>		
4 <sup>th</sup> Nov '24	English	
	Maths	
	Science	
11 <sup>th</sup> Nov '24	English	
	Maths	
	Music	
18 <sup>th</sup> Nov '24	English	
	Maths	
	Humanities	
25 <sup>th</sup> Nov '24	English	
	Maths	
	Science	
2 <sup>nd</sup> Dec '24	English	
	Maths	
	Computing	

Date	Schedule	
9 <sup>th</sup> Dec '24	English	
	Maths	
	MFL	
16 <sup>th</sup> Dec '24	English	
	Maths	
	DT	
<b>Term 3</b>		
6 <sup>th</sup> Jan '25	English	
	Maths	
	Science	
13 <sup>th</sup> Jan '25	English	
	Maths	
	Humanities	
20 <sup>th</sup> Jan '25	English	
	Maths	
	Art	
27 <sup>th</sup> Jan '25	English	
	Maths	
	Computing	
3 <sup>rd</sup> Feb '25	English	
	Maths	
	Science	
10 <sup>th</sup> Feb '25	English	
	Maths	
	Careers	

Extra-Curricular	





# How else can I use my Knowledge Organiser?

The Knowledge Organisers in this booklet will help you learn a wide range of knowledge to prepare you for your lessons as well as the multiple-choice tests at the end of this block of learning.

To get the most out of your Knowledge Organisers, you should be learning sections and then testing yourself. There will be set tasks each week based on the Knowledge Organisers, and there are some optional ideas below that you could try in addition to this if you wish.

## Key vocabulary:

- Highlight key terms for a subject and look up the definitions
- Write a sentence using the key terms you have highlighted
- Practice spellings – cover, write and check to learn the correct spellings of key terms

## Quizzes/questions:

- Write some self-quizzing questions based on the information read
- Test your friends and family on their knowledge of a subject
- Get your parents/carers to ask you some questions
- Create exam style questions and then swap with a friend

## Reflection:

- Before a topic – rank order your confidence and then revisit at the end of the topic, rank again and consider where you have improved
- Add more detail to the Knowledge Organiser after you have been taught that topic
- Traffic light (red, amber, green) each box based on how confident you are

## Revision:

- Create 2-3 flashcards each week based on each box
- Create a mind map showing the key information from the Knowledge Organiser
- Read ahead to develop skills, knowledge and understanding so you feel more confident before lessons

## General use:

- 50 words, 30 words, 10 words – summarise the information on the Knowledge Organiser from 50 words to 30 words to 10 words
- Pictionary – learn the definitions then draw it for your friends/family to guess
- Elevator pitch – summarise the information in a box/whole Knowledge Organiser for a 30 second presentation
- Generation game – like the famous conveyor belt – look at the Knowledge Organiser and then try to remember as many items as possible
- Key term stories – write a short story using 6 key words that are found on the Knowledge Organiser
- Scavenger hunt – read through the Knowledge Organiser with a friend/family member and see who can find specific information/facts first
- Read, cover, check – read the box, write out what you can remember, check what you have missed (then add in purple pen)

“Education is the passport to the future, for tomorrow belongs to those who prepare for it today.”

Malcolm X

“Success is no accident. It is hard work, perseverance, learning, studying, sacrifice and most of all, love of what you are doing or learning to do.”

Pele

“Sticking to good habits can be hard work, and mistakes are part of the process. Don’t declare failure simply because you messed up or because you’re having trouble reaching your goals. Instead, use your mistakes as opportunities to grow stronger and become better.”

Amy Morin



## KS3 English I.S

Your task each week is to understand the meaning of and spell correctly 5 key words.

Each student as a minimum should:

- Create two different sentences showing your understanding of the word.

E.G.: **hierarchy**:

- Hierarchy** is shown in A View From the Bridge through the character of Eddie.
- In Romeo and Juliet, women were lower than men in **hierarchy**.

*N.B.: You can change the tense of your word to suit your sentences.*

### OR

- Create flashcards which display the words and their definitions written in your own words.

However, students could also complete the following:

- Challenge:** Complete **both** the tasks above.
- Extra Challenge:** Using the template at the end of the booklet, create a Frayer model for one or two of the words. (Etymology= where the word comes from)
- Super Challenge:** Create a word map. Start with the original word in the middle and add words you associate with that word around it, then words you associate with the secondary words OR write a short story of your choice that includes the key words for the week.

#### Frayer Model Template

Definitions	Etymology
Synonyms	Use in a sentence



Due Date	Word	Definition
16th Sept	Revolution Anaphora	An overthrow of a governing body. The repetition of a word or phrase at the beginning of consecutive sentences.
	Totalitarianism	A system of government where they have complete control and power over the state.
	Dystopia	An imagined state or place where there is great suffering.
	Abstract	An idea, feeling or quality, not a material or physical object.
23rd Sept	Allegory	A story with a hidden meaning, usually a political or moral one.
	Interpretation	An explanation or opinion of what something means.
	Propaganda	Information or ideas that are spread by an organisation/government to influence people's opinions.
	Hyperbole	Exaggerated statements or claims.
	Squalid	Extremely dirty or unpleasant
30th Sept	Enlightened	Showing rational or well informed outlook on something
	Audacious	Being bold and daring
	Justification	The reasoning/explanation behind something
	Culprit	The person responsible for a crime
	Intrigue	To create a feeling of curiosity

7th Oct	Victimise Alienate Maternal Belligerent Dutiful	To single someone out for cruel and unjust treatment To make someone feel cut off from others/alone Motherly feelings of care Quick to argue/be aggressive Obediently fulfilling duties
14th Oct	Idealistic Honour Coherent Melancholic Volatile	Grand dreams/ideas that may seem achievable to others The quality of knowing and doing what is right OR Something held in great respect/high esteem Logical and consistent Feeling of sadness Likely to change rapidly and unpredictably
21st Oct	Hierarchy Ambiguous Turmoil Harmatia Fate	A system of organisation showing perceived importance Open to more than one interpretation A state of great disturbance or confusion A fatal flaw in a tragic hero leading to their downfall Events outside of someone's control, destined to happen
4th Nov	Tragedy Narrator Vulnerable	A very sad event or situation, especially one involving death or suffering. The voice telling the story. A state of feeling emotional or possibility of being attacked or harmed.

	Prologue	An introductory section of text.
	Prejudice	An unfair or unreasonable opinion or feeling formed without enough thought or knowledge.
11th Nov	Characteristics	A feature or quality belonging to a person, place or thing.
	Victim	A person harmed, injured or killed as a result of a crime or accident.
	Colossus	Something of enormous size, ability or importance.
	Immigration	The act of moving to live permanently in another country.
	Tenement	A building made up of multiple flats.
18th Nov	Symbolism	When a thing or image represents an idea or concept.
	Motif	A repeated pattern.
	Stage directions	Instructions in a play indicating movement, tone, position of actors or related to the set.
	Stereotype	A widely held belief about something that may be exaggerated or untrue.
	Verb	A word or phrase that describes an action, condition or experience.
24th Nov	Dramatic Irony	When the audience knows something before the characters do.
	Community	A group of people with a common characteristic or living within close proximity.
	Soliloquy	Speaking one's thoughts aloud when by oneself.
	Monologue	A speech by one person.
	Justice	The condition of being morally correct and fair.

2nd Dec	Advocate	To publicly support or suggest an idea, development or way of doing something.
	Anticipate	To imagine or expect that something will happen.
	Stereotype	A widely held but fixed image or idea of a particular type of person or thing.
	Mercy	Compassion or forgiveness shown towards someone.
	Forgiveness	The action of forgiving or being forgiven.
9th Dec	Dialect	A form of language to a specific region or group
	Femininity	Qualities or characteristics of women.
	Materialism	Considering material possessions are the most important thing in life.
	Platonic	Affectionate and loving but not sexual or romantic.
	Paranoia	Unjustified suspicion and mistrust of something or someone.

16th Dec	Attain	To reach or succeed in getting something.
	Clarify	To make something clear or easier to understand by giving details.
	Compatible	To exist, live or work successfully with something or someone else.
	Contradict	To say the opposite of what someone else has said.
	Honour	Quality of knowing and doing the morally right thing.
6th Jan	Empathy	The ability to share someone else's feelings.
	Resolution	The act of solving or ending a problem by coming to a decision.
	Deviate	To go in a different direction.



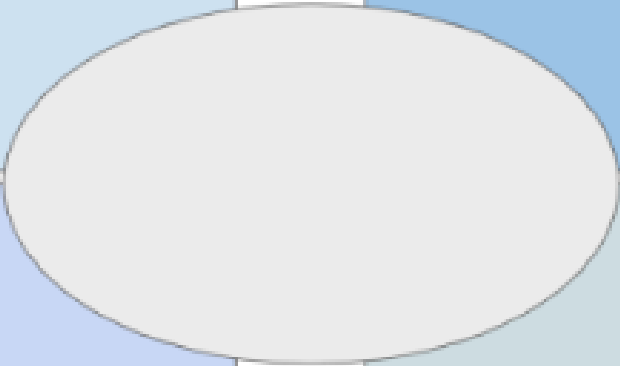
	Duration	The length of time that something lasts.
	Accent	The way in which people in a particular area, country or social group pronounce words.
13th Jan	Eliminate	To remove or take away someone or something.
	Immigration	The act of someone coming to live in a different country.
	Belonging	A feeling of being happy or comfortable as part of a group.
	Climax	The highest or most intense point in a narrative.
	Omeria	The mafia code of silence.

20th Jan	Fourth wall	A metaphorical (invisible) wall that separates the characters and the audience.
	Masculinity	The characteristics that are traditionally thought to be typical of or suitable for men.
	Homosexuality	The act of being sexually attracted to people of the same sex.
	Xenophobia	Extreme dislike or fear of foreigners, their customers, as well as their religions.
	Dominance	The action of taking control of other people in a forceful way.
27th Jan	Patriarchy	The control by men, rather than women for power and authority in society.
	Betrayal	An act of not being loyal to other people.
	Obsession	Something or someone that you think about all the time.
	Submissive	Obeying or behaving by others rules.

	Society	An organised group of people that share the same values and interests.
3rd Feb	Inevitable	Something certain to happen and unable to be avoided.
	Integral	An important part of something.
	Nurture	To take care of, feed and protect someone as they grow.
	Intervene	To intentionally become involved in a difficult situation in order to improve it or prevent it from getting worse.
	Hamartia	A fatal flaw of a tragic hero (something that leads to their downfall)
10th Feb	Deliberate	Something intentional or planned.
	Isolate	To separate something from other things.
	Context	The situation within which something exists or happens.
	Perspective	A point of view.
	Manipulate	To influence or control someone to your advantage, often without that person knowing it.

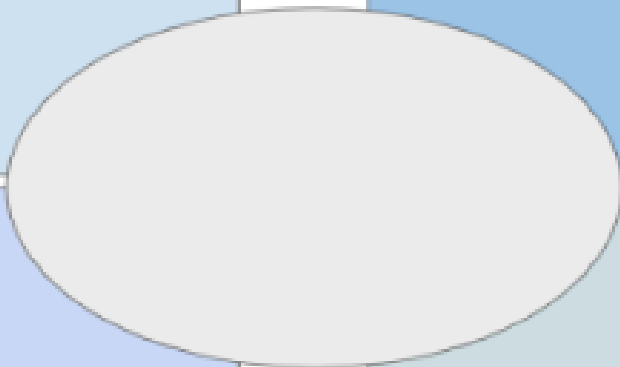
## Frayer Model Template

<u>Definitions</u>	<u>Etymology</u>
<u>Synonyms</u>	<u>Use in a sentence</u>

A central light gray oval is positioned in the middle of the four quadrants of the Frayer Model Template, serving as a focal point for the student's work.

## Frayer Model Template

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# Hans Price Maths Department

All Independent Study in the Maths department is set using the following online platforms

The logo for SPARX MATHS, with 'SPARX' in white on a black background and 'MATHS' in blue on a white background.

You need to log in to your SPARX account, where there are 3 types of homework:

- **Compulsory**
  - **XP Boost**
  - **Target**

Every student needs to get **100%** of their compulsory homework completed every week. Students need to write out the bookwork codes of each of the questions in their homework book and complete the bookwork checks online.

XP boost and Target sections are additional resources that the students can complete if they wish. They will support the students to make greater progress in Maths, but do not form part of the compulsory Independent Study.

**If students get stuck on any question, they should watch the associated video to help them complete the task.**

We also subscribe to Times Tables Rock Stars. We encourage students to engage with this program to ensure their foundation of knowledge is solid. We will run College competitions and award prizes to those students with the most coins.



**These homework platforms are designed to consolidate your knowledge, and students at KS3 can expect this to take up to 1 hour per week.**



# CC1/2 States of Matter & Separation Techniques

## 1. States of Matter

All substances are made up of particles. Solids (s), liquids (l) and gases (g) are made up of particles. Particle arrangement, movement and energy levels determine the state of matter.



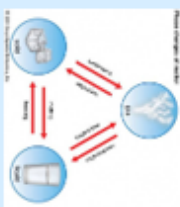
State	Arrangement	Movement	Energy levels
Solid	Fixed, regular pattern, tightly packed	Vibrate about fixed positions	Least
Liquid	Irregular pattern, most touching	Slide over one another	-
Gas	Randomly	Freely, in all directions	Most

## 2. Changes of State

When particles gain energy, their movement and arrangement changes.

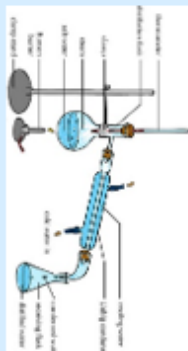
More energy causes more forces of attraction between particles to break. The amount of energy needed for a state change depends on the strength of the forces between particles.

Melting and freezing happen at melting point. Boiling and condensing happen at boiling point.



## 4. Simple Distillation

This technique is used to separate a mixture of liquids. During distillation, the mixture gets heated causing one liquid at a time to evaporate and then condense.

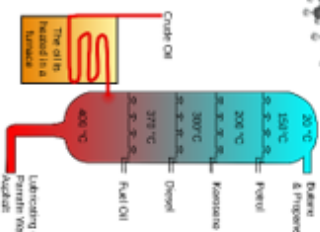
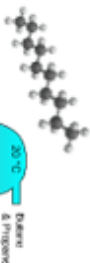


Each liquid has a different boiling point. This enables the liquids to be separated.

## 5. Fractional Distillation

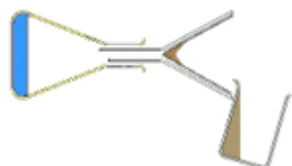
Crude oil is a mixture of hydrocarbons. These hydrocarbons have different boiling points. Each fraction contains molecules with a similar number of carbon atoms in them. The process used to do this is called fractional distillation.

Crude oil is heated and hydrocarbons boil and condense at certain temperatures. Small hydrocarbon chains boil at low temperatures and long hydrocarbon chains boil at high temperatures.



## 7. Filtration

Filtration can be used to separate substances that are insoluble in a solvent from those that are soluble. An example is sand and water. Large sand particles collect in the filter paper (residue) and the water will pass through the filter paper (filtrate).

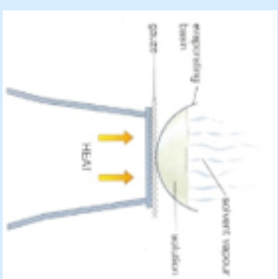


## 8. Crystallisation

Crystallisation can be used to separate a soluble substance from a solvent by evaporation.

The heat energy causes liquid particles to move further apart and become randomly arranged, moving freely in all directions.

An example of crystallisation is producing sodium chloride from a salt solution.



## 9. Potable Water

Human drinking water containing low levels of dissolved salts and microbes is safe to drink, clean and cook with. This water is known as potable water.

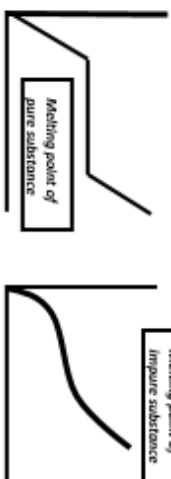
Most of the UK's water collects in lakes and rivers. Sterilising agents such as chlorine, ozone and UV can be used to treat water.



- 4 steps to produce potable water:
1. Select water source
  2. Sedimentation
  3. Filtration
  4. Sterilisation/chlorination
- In countries where fresh water is limited, desalination of sea water provides potable water. Distillation or reverse osmosis are used BUT require large amounts of

## 3. Pure vs Impure

A pure substance is a single element or compound, not mixed with any other substances.



Pure substances melt and boil at specific temperatures. Heating graphs can be used to distinguish pure substances from impure substances.

Chromatography is used to separate mixtures and help identify substances. The solvent (mobile phase) separates substances on chromatography paper (stationary phase) due to their solubility.

An Rf value can be calculated to show the ratio of the distance moved by a compound to the distance moved by the solvent:

$$R_f = \frac{\text{distance moved by substance}}{\text{distance moved by solvent}}$$

Mixtures or impure substances produce multiple spots. Pure substances produce a single spot.



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 Name the **state of matter** in which the particles:

a are close together and randomly arranged.

\_\_\_\_\_

b are regularly arranged.

\_\_\_\_\_

c have no **attractive forces** between them.

\_\_\_\_\_

2 Describe what happens to the arrangement and movement of particles when a substance boils.

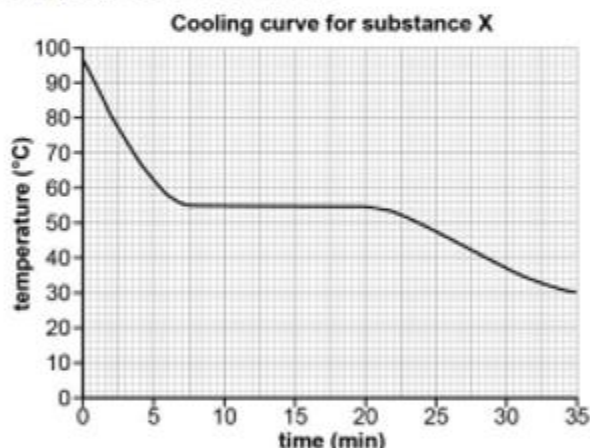
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3 Explain why changes of state are **physical changes**.

\_\_\_\_\_

4 The diagram shows the cooling curve for substance X.



Add the labels **a**, **b**, **c** or **d** to the graph to show:

a where the substance is freezing

b the **melting point** of the substance

c where the substance is in the liquid state and cooling down

d where the mean energy of the particles is highest.

5 Butane is a fuel. Its melting point is  $-140\text{ }^{\circ}\text{C}$  and its **boiling point** is  $-1\text{ }^{\circ}\text{C}$ .

Predict the state of butane at  $-150\text{ }^{\circ}\text{C}$  and at  $25\text{ }^{\circ}\text{C}$ .

\_\_\_\_\_

6 Bromine is in its liquid state at  $25\text{ }^{\circ}\text{C}$ . Explain what this tells you about its melting point and boiling point.

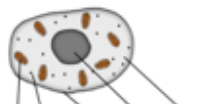
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### 1. Animal Cells

Animal cells are eukaryotic because they have a nucleus.



cytoplasm	site of chemical reactions in the cell	gel like substance containing enzymes to catalyse the reactions
nucleus	contains genetic material	controls the activities of the cell and codes for proteins
cell membrane	semi permeable	controls the movement of substances in and out of the cell
ribosome	site of protein synthesis	mRNA is translated to an amino acid chain
mitochondrion	site of respiration	where energy is released for the cell to function

### 2. Plant Cells

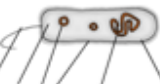
Plant cells are eukaryotic because they have a nucleus. Plant cells contain all of the animal parts plus a few extra:



permanent vacuole	contains cell sap	keeps cell turgid, contains sugars and salts in solution
cell wall	made of cellulose	supports and strengthens the cell
chloroplast	site of photosynthesis	combine chlorophyll, absorb light energy

### 3. Bacteria Cells

Bacteria cells are prokaryotic because they do not have a nucleus. They



cytoplasm	site of chemical reactions in the cell	gel like substance containing enzymes to catalyse the reactions
bacterial DNA	not in nucleus floats in the cytoplasm	Can be found as chromosomal DNA and plasmid DNA (small ring)
cell wall	NOT made of cellulose	supports and strengthens the cell
cell membrane	semi permeable	controls the movement of substances in and out of the cell
flagella	whip like tail	allows the bacterial cell to move
ribosome	site of protein synthesis	mRNA is translated to an amino acid chain

### 4. Specialised Cells

There are some cells which are specialised (or adapted) to do different jobs in animals and plants.

cell	specialised	function	structure
epithelial cell	flat	forms a barrier	thin layer of cells
nerve cell	long and thin	transmits electrical impulses	axon, dendrites
muscle cell	long and striated	contracts to produce movement	myofibrils
red blood cell	biconcave disc	transports oxygen	hemoglobin

### 5. Microscopes

You need to be able to label a microscope as well as describe how to use a light microscope.



Many parts of a cell were not discovered before the electron microscope was invented. This has a larger magnification and higher resolution compared to the light microscope.

To calculate magnification, you can multiply size of the eyepiece lens by the size of the objective lens.

$$\text{eg. eyepiece lens } 10\times \times \text{ objective lens } 4\times = 40\times$$

You can also divide an image size by the actual size.



### 6. Digestive Enzymes

Enzymes in your digestive system break large insoluble molecules down into smaller soluble molecules that can be absorbed into the blood for transportation.

<b>Carbohydrates</b>	<b>Carbohydrase</b>	<b>Simple sugars</b>
Made in the Salivary glands, Pancreas, Small intestine		
<b>Proteins</b>	<b>Protease</b>	<b>Amino acids</b>
Made in the Stomach, Pancreas, Small intestine		
<b>Fats (lipids)</b>	<b>Lipase</b>	<b>Glycerol + fatty acids</b>
Made in the Pancreas, Small intestine		

### 7. Enzyme Action

The lock and key model is used to explain how enzymes work.

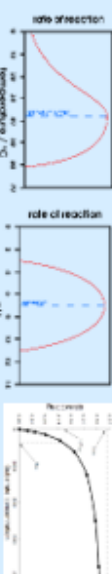


Large changes in pH or temperature can cause an enzyme to stop working (denature). The active site changes shape so the substrate no longer fits.



### 8. Enzyme Activity

Enzymes increase the rate of specific reactions in living organisms. Enzyme activity is affected by temperature, pH and substrate concentration.



Enzymes have an optimum temperature

Enzymes have an optimum pH

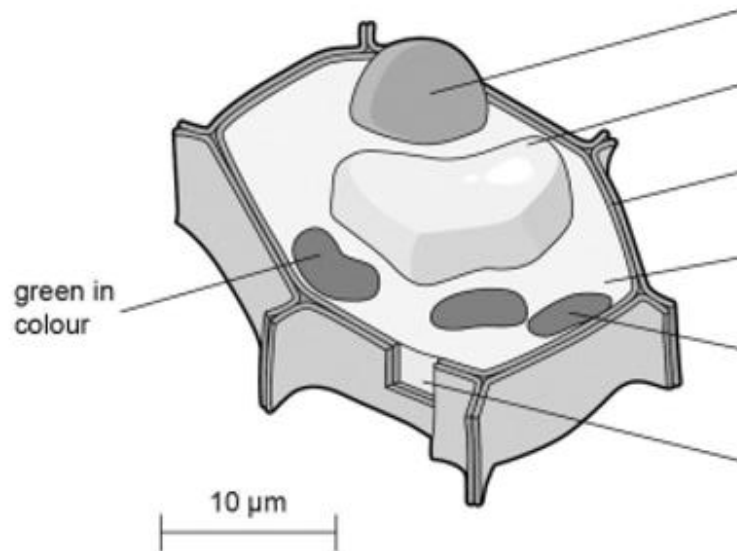
Increasing substrate concentration increases rate. This is limited by number of active sites.

### 9. Transportation Processes

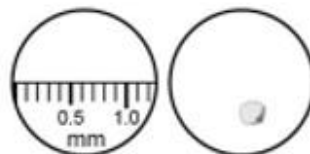
Diffusion	Osmosis	Active Transport
No energy required	No energy required	Energy required
Particles in solution or gas	Water particles	Movement of particles
Higher concentration to lower concentration	Dilute solution to more concentrated solution	Dilute solution to more concentrated solution
Oxygen and carbon dioxide during gas exchange in lungs	Water into roots via root hair cells	Mineral ions into plant roots Glucose into the small intestine

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

- 1 a Label the names of the sub-cellular parts of this cell.



- b Is this cell from a plant or an animal? Explain your choice. \_\_\_\_\_  
 \_\_\_\_\_
- c One part can sometimes be seen using a light microscope but it is not shown here. Draw it in on the diagram and label it with its name.
- d What is the function of the part that you have drawn in? \_\_\_\_\_  
 \_\_\_\_\_
- e What is the function of the largest part inside the cell? \_\_\_\_\_  
 \_\_\_\_\_
- f What other parts do both animal and plant cells have but which cannot be seen using a light microscope? \_\_\_\_\_
- g The function of these parts is to make a certain substance. What substance do they make? \_\_\_\_\_  
 \_\_\_\_\_
- 2 A special type of glass slide with a very fine scale is viewed through a microscope. The image below on the left shows what is seen. Human fat cells are then observed using the same magnification, shown below on the right.



- a What is the diameter of the **field of view**? \_\_\_\_\_
- b Estimate the diameter of the fat cell. \_\_\_\_\_
- c Why is it useful to estimate things in this way, rather than doing careful measurements? \_\_\_\_\_
- 3 Use the **scale bar** on the drawing of the cell at the top of the page to estimate the length of the green sub-cellular structures. \_\_\_\_\_

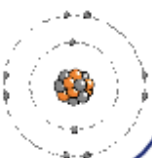
## CC3/4 Atomic structure and periodic table



### 1. Atoms

*The smallest part of an element that can exist*

Have a radius of around 0.1 nanometres and have no charge (0). The nucleus is very small compared to the overall size of the atom.



Name of Particle	Relative Charge	Relative Mass
Proton	+1	1
Neutron	0	1
Electron	-1	Very small

Atoms contain equal numbers of protons and electrons in order to have an overall neutral charge.

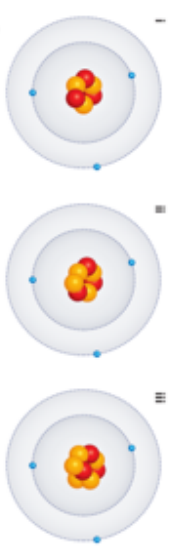
### 2. Reading the periodic table

For each element on the periodic table there are two numbers. The top number is the mass number, the bottom number is the atomic or proton number.

7	Mass number	The sum of the protons and neutrons in the nucleus	Number of electrons = number of protons
Li	Atomic number		
3	Element	All atoms of a certain element had the same number of protons.	This number of protons is unique to that element.

### 3. Isotopes

Atoms of the same element with the same number of protons and different numbers of neutrons are called



${}^6_3\text{Li}$   
Isotopes of the same element are chemically identical because they have the same number of protons and electrons.

## 5. Calculating the average relative atomic mass of all isotopes

All elements exist as mixtures of isotopes. We use this idea to calculate an element's relative atomic mass (RAM or  $A_r$ ). A relative atomic mass is the mean mass of an atom of an element compared with carbon-12.

RAMs are not whole numbers 9e.g. Chlorine RAM is 35.5 we can calculate this using the abundances of each isotope. See below

Relative abundance =  
 $(\% \text{ isotope 1} \times \text{mass isotope 1}) + (\% \text{ isotope 2} \times \text{mass isotope 2}) \div 100$   
 e.g.  $(25 \times 37) + (75 \times 35) \div 100 = 35.5$

## 6. Mendeleev's periodic table 1869

By 1869 there was 63 elements discovered. Mendeleev a Russian chemist arranged these elements into order. This was the first periodic table. His table:

- Arranged elements in rows according to their chemical properties (i.e. lithium, sodium, potassium)
- The columns he arranged in mass number.
- Mendeleev used gaps in his table to make predictions about the properties of undiscovered elements.

One main difference to our modern periodic table is Mendeleev ordered by mass number where we now order by atomic number. The reason for this is in

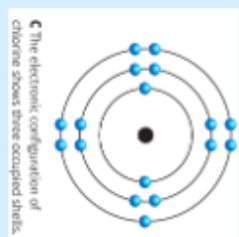
### 1869 the proton had not been discovered yet. The electron was discovered in 1897.

In an atom electrons occupy electron shells arranged around the nucleus.

The way in which an atom's electrons are arranged is called its electron configuration

- The first shell can fit 2 electrons
- The second and third shells can contain up to eight electrons.
- You fill a shell before moving to the final shell.

Chlorine has 17 electrons (1<sup>st</sup> shell 2, second shell 8, third shell 7)



## 8. Today's periodic table structure

- Elements in a row or periodic are in order of increasing atomic number.
- Each row has the same number of electron shells
- Elements with similar properties are in the same column or group
- Each group has the same number of electrons on their outer shell
- Non metals are on the right of the table
- Metals on the left.

### 4. History of the atom

#### Pre 1900

*Tiny solid spheres that could not be divided*  
 Before the discovery of the electron, John Dalton said the solid sphere made up the different elements.



#### 1897 'plum pudding'

*A ball of positive charge with negative electrons embedded in it*

JJ Thompson's experiments showed that showed that an atom must contain small negative charges (discovery of electrons).



#### 1909 nuclear model

*Positively charged nucleus at the centre surrounded by negative electrons*

Ernest Rutherford's alpha particle scattering experiment showed that the mass was concentrated at the centre of the atom.



#### 1913 Bohr model

*Electrons orbit the nucleus at specific distances*  
 Niels Bohr proposed that electrons orbited in fixed shells; this was supported by experimental observations





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

- 1 Atomic structure is a good example of a theory that has changed over the last 200 years. Our current model includes **subatomic particles**.

Circle the statements in the box that describe any of Dalton's original ideas about **atoms** that have been changed.

Atoms of <b>elements</b> are identical.	Atoms contain charged particles.
Most of an atom is empty space.	Atoms are indestructible.

- 2 The table has 8 statements about atoms. 4 of them are true but the others are false. Put a tick in the correct box for each statement. The first one has been done for you.

	True	False
<b>a</b> The <b>nucleus</b> of an atom contains chromosomes.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>b</b> All atoms contain <b>protons</b> .	<input type="checkbox"/>	<input type="checkbox"/>
<b>c</b> Atoms are big enough to see.	<input type="checkbox"/>	<input type="checkbox"/>
<b>d</b> <b>Electrons</b> are arranged in shells around the nucleus.	<input type="checkbox"/>	<input type="checkbox"/>
<b>e</b> Electrons have a larger mass than protons or neutrons.	<input type="checkbox"/>	<input type="checkbox"/>
<b>f</b> Electrons have a <b>relative charge</b> of +1 and a <b>relative mass</b> that is usually ignored (it is 'negligible').	<input type="checkbox"/>	<input type="checkbox"/>
<b>g</b> <b>Neutrons</b> are electrically neutral.	<input type="checkbox"/>	<input type="checkbox"/>
<b>h</b> <b>Protons</b> have a relative charge of +1 and a relative mass of 1.	<input type="checkbox"/>	<input type="checkbox"/>

- 3 Look at each of the false statements in question 2. For each one, write a correct version of the statement. For example, the statement 'The nucleus of an atom contains chromosomes.' is false. A possible correct statement is shown below.

Correct statement: a The nucleus of an atom contains protons and neutrons.

Correct statement: \_\_\_\_\_

Correct statement: \_\_\_\_\_

Correct statement: \_\_\_\_\_

## 1. Growth in Animals

Growth is an increase in the number or size of cells. It can be measured by an increase in mass and an increase in length.

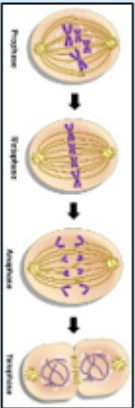
At first, cells divide before differentiating to become specialised. Specific structures help specialised (differentiated) cells carry out a particular function.



## CB2 Cells and Control

### 4. Mitosis

Mitosis is part of the cell cycle and has 5 stages: prophase, metaphase, anaphase, telophase and cytokinesis. Interphase occurs before mitosis as part of the cell cycle.



**Interphase** – DNA replication makes copies of chromosomes

**Prophase** – nucleus breaks down and spindle fibres form

**Metaphase** – chromosomes line up at the equator (middle) of the spindle fibres

**Anaphase** – chromosome copies are pulled apart to opposite poles (ends) of the cell

**Telophase** – a new nuclear membrane forms around each set of chromosomes

**Cytokinesis** – cell membrane forms to separate the cells

Some organisms can reproduce using one parent. This is known as asexual reproduction where the offspring are clones (genetically identical) of the parent. Asexual reproduction is faster but does not result in variation.

Uncontrolled cell division and growth results in the formation of tumours. This is how cancer develops.

## 7. Nerves and Nervous System

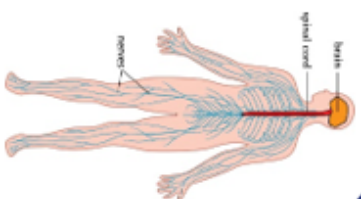
The Central Nervous System (CNS) is made up of the brain and spinal cord.



**Axon** – carries electrical impulses to axon terminals

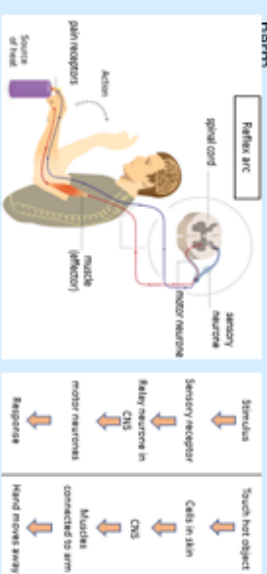
**Dendron** – carries electrical impulse from receptor cells in sensory neurones

**Myelin sheath** – insulates the electrical impulse in the neurones



## 8. Reflex Arc

Reflexes are automatic and rapid. They do not involve the conscious part of the brain and can protect humans from harm.



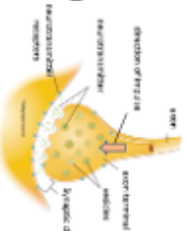
## 9. Synapses

The gap between two neurones (nerve cells) is called a synapse.

When an impulse (electrical signal) reaches the end of a neurone, a chemical neurotransmitter is released.

It diffuses across the gap (synapse) and is detected by the next neurone which then triggers another impulse.

Synapses slow down neurotransmission but do ensure impulses only flow in one direction.



## 2. Growth in Plants

Groups of cells at the end of each shoot and root allow a plant to continue to grow. These groups of cells are called meristems. These cells divide by mitosis before increasing in length (elongating) and finally differentiating into specialised plant cells.

Palisade cells are located in the leaf of a plant. They contain a lot of chloroplasts for photosynthesis

Root hair cells do not contain any chloroplasts. Instead, they have a large surface area to increase the uptake of water and nutrients from the soil.

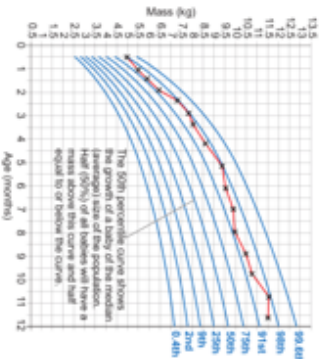


## 3. Percentile Charts

Percentile charts can be used to monitor growth.

The 50<sup>th</sup> percentile is the average growth of the population at that age.

The red line shows how the mass of one baby changes with age (in months old).



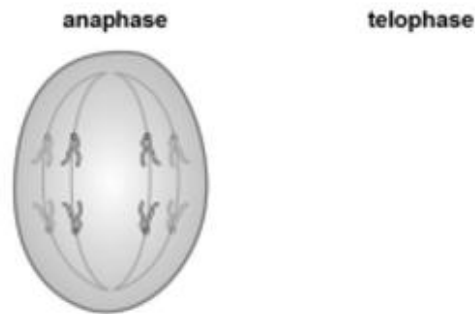


Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

- 1 State two parts of a cell that make copies of themselves before **mitosis** begins.

\_\_\_\_\_

- 2 Look at the diagram below and draw what the cell looks like in the next stage of mitosis.



- 3 Which part of the **cell cycle** is taking place when:

- a the chromosomes line up on the equator of the cell \_\_\_\_\_
- b the nucleus membrane is breaking down \_\_\_\_\_
- c DNA and sub-cellular parts are copied \_\_\_\_\_
- d the cytoplasm of the cell is separated? \_\_\_\_\_

- 4 Why is mitosis important for organisms? Tick three boxes to show three reasons.

- growth                                       evolution                                       respiration
- repair                                               reproduction                                       digestion

- 5 The cells produced from mitosis are genetically identical, **diploid** cells.

- a Describe what 'genetically identical' means.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b Explain what 'diploid' means and why it is important to the cell. (*Hint: What would happen to a cell if it was not diploid and went through two rounds of the cell cycle?*)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Causes of WW1 background:** Historians disagree about what caused the First World War. Due to the MAIN causes of WW1 the 'balance of power' between the nations of Europe became unstable. It was a global conflict involving the main European powers and their empires from August 1914 to November 1918.

Key Events

1	<b>1879</b> – Dual Alliance between Germany and Austria-Hungary signed.
2	<b>1882</b> – <b>Triple Alliance</b> formed when Italy joined the Dual Alliance.
3	<b>1904</b> – Entente Cordiale signed between Britain and France.
4	<b>1905</b> – Germany creates the <b>Schlieffen Plan</b> to avoid facing a war on two fronts.
5	<b>1906</b> – Britain launches HMS Dreadnought, starting the <b>Naval Arms Race</b> .
6	<b>1907</b> – Russia joins the alliance with Britain and France, becoming the <b>Triple Entente</b> .
7	<b>28th June 1914</b> – <b>Assassination of Archduke Franz Ferdinand</b> .
8	<b>28 July 1914</b> – Austria-Hungary declares war on Serbia <b>WW1 began</b> .
9	<b>1st August 1914</b> – Germany declares war on Russia.
10	<b>2nd August 1914</b> – France mobilises in support of Russia.
11	<b>3rd August 1914</b> – Germany declares war on France.
12	<b>4th August 1914</b> – <b>Britain declares war on Germany</b> .
<u>Key People</u>	
13	Franz Ferdinand Heir to the throne of Austro-Hungarian Empire. Assassinated by Gavrilo Princip.
14	Gavrilo Princip A Bosnian Serb from a peasant family, who succeeded to kill I Franz Ferdinand, the trigger event for World War One.
15	Kaiser Wilhelm II The Kaiser was the official head (Emperor) of Germany before and during World War 1.



History – Year 9  
Knowledge Organiser  
Term 1  
Causes of WW1

MAIN Causes of WW1

- M: Militarism:** A country wanting to have a strong army and navy.
- A: Alliances:** A group of countries that promise to protect and support each other.
- I: Imperialism:** A act of growing an empire. This brought conflict with other countries keen to expand their empires.
- N: Nationalism:** The belief that your country is stronger and better than others.

Find out more:  
<https://www.bbc.co.uk/bitesize/guides/z4n4jxs/revision/1>

Key Historians

Max Hastings	A <b>military historian</b> who believes Germany was to blame for the start of WW1.
Gerhard Hirschfeld	A <b>modern historian</b> who believes that WW1 was due to the countries in alliances.
Richard Evans	A <b>modern historian</b> who believes that the Serbians are to blame for the start of WW1.

Key Terms

16	Long term cause	Factors or causes which happen along time before an event takes place.
17	Short term cause	Factors or causes which happen just before an event takes place. Usually a catalyst.
18	The Triple Alliance	The Triple Alliance was the treaty by which Germany, Austria-Hungary and Italy agreed to support each other militarily in the event of an attack against any of them.
19	The Triple Entente	The Triple Entente was a diplomatic and military agreement between France, Great Britain, and Russia, formed in part as a response to the formation of the Triple Alliance.
20	Black Hand Gang	Serbian Nationalist group aimed to unite all Serbian people in a Greater Serbia.
21	Naval arms race	The race between Germany and Great Britain between from 1906 to 1914 following Britain launched the first dreadnought ship that meant all others were redundant before its awesome fire power.
22	Schlieffen plan	The German idea to avoid a war on two fronts. It would quickly defeat France. It assumed the Russian's would be slow to mobilise. The plan did not work.

History Skills Focus

**Chronology:** Putting events into order of time.  
**Interpretation:** a viewpoint or opinion. *What viewpoint is being given in the source about the cause of WW1?*  
**Judgement** – how far do you agree with an interpretation? (Consider why you agree and/or disagree with the interpretation given)

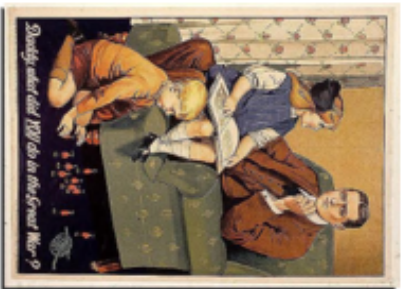


The man in the bath is Kaiser Wilhelm, the leader of Germany

Propaganda is information, especially of a biased or misleading nature, used to promote a political cause or point of view.

In the First World War propaganda posters were used to:

- ✓Recruit men to join the army, it made men feel cowardly if they did not join up;
- ✓Recruit women to work in the factories and in the Women's Land Army;
- ✓Encourage people to save food and not to waste it.



Khudadad Khan

Born: 1888

Place of Birth: Dab, in the Chakwal district, the Punjab Province

Occupation: Infantryman in the Indian Army  
4050

129th Duke of Connaught's Own Baluchis  
Joined up: September 1914

Major Battles: Battle of Ypres, 1914

Khan won the Victoria Cross for his bravery



## History 9.3

### Who should we remember in WWI?

Walter Tull

Black soldiers often faced discrimination and racism compared to their white colleagues. They were overlooked for promotion or given difficult, boring menial tasks.

Their contribution to the war has been overlooked in the past.

Despite army rules which forbade a 'person of colour' being commissioned as an officer, Walter was promoted to lieutenant after completing officer training school

He was recommended for a Military Cross, but it was never awarded.



Flora Sandes was the only British woman to officially fight on the front line in World War One.

When war broke out in 1914 Flora was 38 Flora signed up as a volunteer with the St John Ambulance Service and with her unit Flora left Britain to travel to Serbia. After almost a year nursing wounded soldiers, Flora was fluent in Serbian and transferred to the Serbian Red Cross, working with a Serbian infantry regiment on the front line!

Flora was awarded the equivalent of the Victoria Cross for her bravery



Women played a vital part in the First World War.

The history of the First World War runs parallel with important developments in feminism.

There is no single image of women in the War, they took on many different roles and had many different views on their standing.

By the end of the War women had won the right to vote and had secured the right to work.

Although a positive event for women's rights the War cannot be seen as truly emancipating women.



An armistice is an agreement by one or more countries to stop fighting for a period of time.

At the end of 1918, Germany was no longer able to carry on the war.

At 11am on the 11th of November (11th month), Germany signed an armistice.

The Armistice Germany signed said that "all occupied lands in Belgium and France, held since 1870 by Germany were to be evacuated within fourteen days."



## 9.2 World Resources



### Renewable and non renewable resources

- Planet earth contains many **natural resources** which humans can use for our benefit. Some of these resources will last forever (they are renewable) and others will eventually run out (non-renewable).
- If the world's population continues to use resources at our current rate, we would need approx. 1.7 planets to meet this need. Our **ecological footprint** exceeds the world's resources. This is known as **ecological overshoot**.
- Some valuable resources, like oil and coal, are **non-renewable** because it takes millions of years for the minerals to form in the earth's crust. They are fossil fuels.

#### Overshooting Ourselves



### Geological Time Periods



**Natural Resources** are the substances that are found in nature which can be used by humans for our benefit, such as water, soil, coal, minerals, wood and animals.

**Geological time** is the long period of time occupied by the earth's geologic history.

**Raw Materials** are the basic materials or substances from which products can be made, such as wood can be transformed into furniture.

### How many Earths would we need if everyone lived like U.S.A. residents?



Source: National Geographic and Ecological Footprint Accounts 2011  
Additional countries available at [en.earthday.org/1.7-earth-planet](http://en.earthday.org/1.7-earth-planet)

### The Keystone XL Pipeline Proposal

- In 2010, the Canadian government proposed a **new pipeline** to be built, to move millions of **barrels of oil** every year, from Canada in the North in to the USA and from ports in Texas to be exported all over the world.
- In 2015, President **Obama** refused to approve the pipeline. When President **Trump** took over, he did approve it, only for President **Biden** in 2021 to again refuse his permission for the pipeline to be built.
- President Trump and the Canadian government believe the pipeline will create **economic development**, thousands of jobs in the construction sites, and help reduce the USA's dependence on foreign oil.
- Environmental activists think building the pipeline goes against the goals of **reducing the use of fossil fuels** and therefore reducing global warming.

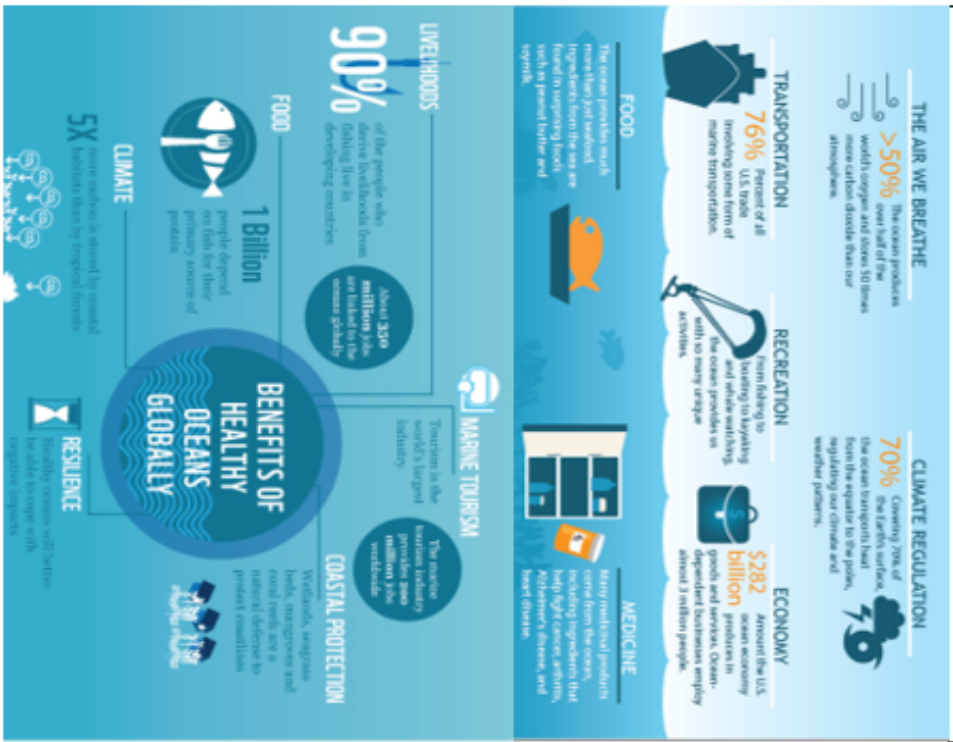


### The Future of the Earth's Resources

- Governments around the world are grappling with the best way to **meet their country's energy needs today**, at the same time as reducing their reliance on non-renewable fossil fuels.
- Newly emerging economies and countries experiencing rapid population growth in particular need plentiful energy resources (as well as food and water) in order to **support their economic development**.
- China and Costa Rica are two different countries both **implementing policies** designed to reduce their carbon emissions and to increase the amount of energy produced by renewable resources in the years ahead.



**Why are the oceans important?**



Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs

Sustainable fishing means leaving enough fish in the ocean, respecting habitats and ensuring people who depend on fishing can maintain their livelihoods.

**Year 9 Geography: Topic 3: Why should we care about the oceans?**

**Overfishing and the impact**

- Overfishing means to catch more fish than the natural system can replace.
- In 1900 our oceans contained six times more fish than today.
- In 2003, a scientific report estimated that industrial fishing had reduced the number of large ocean predators to just 10% of their preindustrial population.
- Millions of people rely on fisheries for employment. In 1993, the North Cod Fishery in Newfoundland, Canada collapsed because of overfishing. Approximately 40,000 jobs were lost. A billion people rely on fish as their main source of protein.
- Habitats such as coral reefs are destroyed by dredging of sea beds by large fishing nets.
- The UK catches 24% more fish stocks than scientific advisors recommend.
- Quotas (limits) in the EU mean that countries can only catch so many tonnes of fish.
- Overfishing means that fish stocks are not naturally being replaced.

**What are ocean currents?**

- The water in the oceans is constantly moving in patterns called currents.
- As the currents flow around the planet they move cold and warm water from one place to another.
- The ocean currents also help move anything that floats in them. This can be sea creatures or ships, but unfortunately can also be rubbish that has been dumped carelessly by people. This rubbish finds its way around the world, polluting the oceans and can be harmful to sea creatures

**Gyre** – Large circular current within the ocean

**The Great Pacific Garbage Patch**

- It is an accumulation of a large area of plastic and other polluting waste – three times the size of France
- 1.15 to 2.41 million tonnes of plastic enter the oceans each year
- Plastic doesn't sink, and it is transported vast distances before ending up in the garbage patch
- The plastics may eventually degrade to microplastics, due to the effects of the sun and waves, but these further damage marine life.

**The Great Pacific Garbage Patch – solutions?**

- Recycling, getting rid of single use plastics and using paper straws.
- Booms that collect plastic from the surface of oceans.
- Biodegradable bags.
- Getting rid of single use plastics.

**The Northwest Passage**

- The Northwest Passage is a sea route that connects the Atlantic and Pacific Oceans.
- In the past, the Northwest passage has been virtually impassable because it was covered by thick, year-round sea ice. However, in recent years, climate change is allowing commercial traffic to pass through the Arctic via this once-impossible route.



Ocean acidification is a change in the properties of ocean water that can be harmful for plants and animals. Scientists have observed that the ocean is becoming more acidic as its water absorbs carbon dioxide from the atmosphere.

**Biodiversity** - the variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable

**What are the impacts of ocean acidification?**

- A change in the pH of the ocean can cause fish to become ill, including slowing their growth
- The growth of coral reefs is limited and they may begin to erode
- Some species of algae grow better under more acidic conditions with the boost in carbon dioxide.
- Other algae, which build calcium carbonate skeletons and help cement coral reefs, do not fare so well. In acidifying conditions, coralline algae can cover up to 92% less area, making space for other types of non-calcifying algae, which can smother and damage coral reefs.
- Oysters, mussels, urchins and starfish will have trouble forming their shells in acidic conditions, and they shells they do form may be weaker





## Year 9 Religious Studies: Situational ethics

Key terms	
Morality	The distinction between right and wrong or good and bad behaviour.
Absolute morality	The belief that what is right will always be right regardless of situation, culture, religious tradition, time or age.
Relative morality	The belief that that different courses of action might be needed/justified in different situations.
Abortion	A procedure to end a pregnancy so that it does not result in the birth of a child.
Sanctity of life	The belief that life is precious or sacred (special). For many religious believers, only human life holds this special status.
Utilitarianism	The theory that states that you should do the action that creates the most happiness for the most amount of people.
Situational Ethics	The theory that states right and wrong always depend on the situation, there are no absolute rules, only to do what is the most loving thing.
Autonomy	The freedom to act on your own values and interests.

### Views on euthanasia

**Some of the arguments against euthanasia**

- euthanasia would weaken society's respect for the value and importance of human life.
- it would lead to worse care for the terminally ill

**Some of the arguments for euthanasia**

- Human beings should have the right to be able to decide when and how they die
- It is expensive to keep people alive when there is no cure for their illness.

**Religious views:**

- Roman Catholic Church teaches that no person has the right to deliberately end the life of another person, or his or her own life.
- Some Christians, however, accept that if a person is terminally ill and in extreme pain or distress, euthanasia may be an act of compassion.
- The Sikh Gurus rejected suicide (and by extension, euthanasia) as an interference in God's plan.
- Islam is against euthanasia. They believe that all human life is sacred because it is given by Allah

### Views on abortion

**Some of the arguments against abortion**

- Every human being, including an embryo or foetus, has the right to live and to reach their potential.
- There are alternatives to abortion, eg adoption.

**Some of the arguments for abortion**

- A woman has the right to choose whether or not she wants to have the baby. It is her body.
- The embryo or foetus does not have the same rights as the mother.

**Religious views:**

- Roman Catholics believe that life begins at conception and therefore abortion is morally wrong.
- Islamic scholars agree that the termination of a pregnancy for foetal anomalies is allowed before ensoulment
- Most Sikhs accept that life begins at conception and abortion is generally forbidden.
- Majority of religions may allow abortions in certain situations, such as to protect the mother's health.

# War: When people disagree



## NEED TO KNOW WORDS

<b>Justice</b>	A situation where people are treated fairly or correctly
<b>Pacifism</b>	The belief that no violence or war can ever be justified
<b>Civilians</b>	People who are not members of the armed forces or other military group
<b>Jihad</b>	To struggle to follow Allah, in some situations this may require the use of violence to prevent further suffering. (lesser Jihad)
<b>War</b>	Armed conflict between two countries or different groups
<b>Just War</b>	A war which is considered morally justified as it follows Thomas Aquinas' 7 rules of Just War.
<b>Justified</b>	When an action is considered good because of the reasons for it or outcome it might produce.

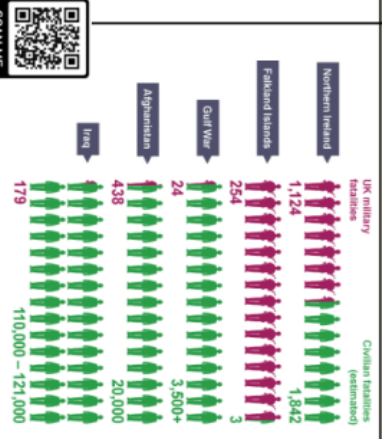
## What are the causes of conflict?

The causes of any war are complex. Wars are rarely about just one thing. They can be declared when a state or states act to:

- attack or invade another state, to **gain territory or resources**
  - **resist** such an attack or invasion by an aggressor
  - **protect another** state from attack by an aggressor
  - **impose domination or political change** on another state, or to resist such domination
  - **challenge a threat** to 'essential national interests' by another state
  - counter perceived threats from a **different ideology, religion or ethnic group**
  - defend the **national honour** when under threat
- War can also occur internally within a state between organised groups. This is known as **civil war**.

## Who or what are the casualties of conflict?

Estimated number of military and civilian fatalities in major UK conflicts since World War Two



## The main casualties of war include:

- servicemen and women who lose their lives or are injured
- civilians who lose their lives or are injured
- civilians who have their families, homes and way of life damaged or destroyed
- damage to the country's infrastructure, eg roads and bridges destroyed
- refugees who have to flee their country of birth to find safety

## What does Christianity teach about war and peace?

Live by the sword, die by the sword Mathew 26	And let him who has no sword sell his mantle and buy one. Luke 22:36	Love your enemies and pray for those who persecute you. Matthew 5:44	Defend the rights of the poor and orphans; be fair to the needy and helpless. Rescue them from the power of evil men. Psalm 82
--------------------------------------------------	-------------------------------------------------------------------------	-------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------

## What are the two types of Jihad?

Greater	Non-violent	Violent
The struggle against oneself	The word of justice in front of the oppressive ruler	To defend, not attack
Spiritual	Verbal	Physical (military)
Against yourself	Against the oppressive ruler	Against those who fight you





## Variables & Data Types

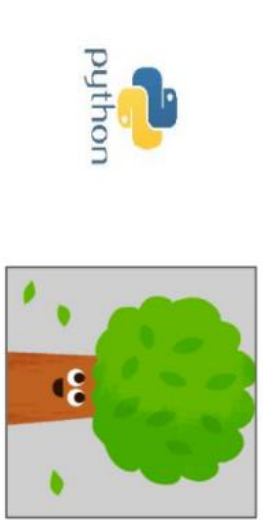
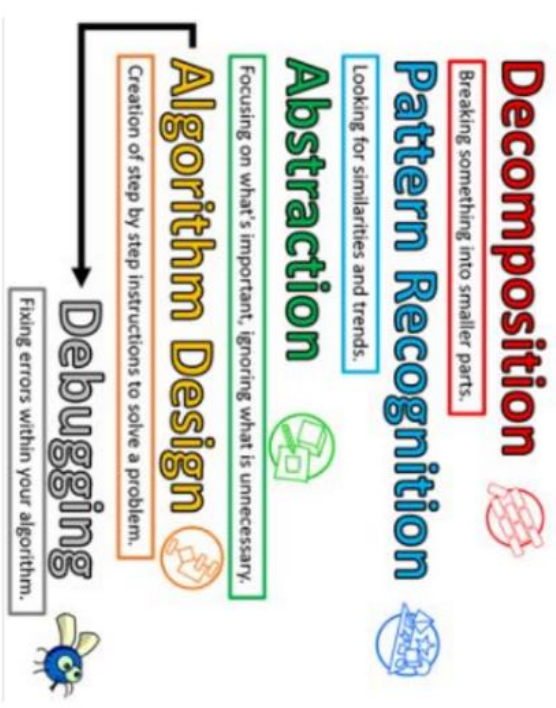
A variable is used to **store data that can change while the program is running**. The variable name (e.g. score) is used to identify the memory location of the data that is stored in RAM



A variable can be used to store different types of data:

<b>Character</b>	One character such as a letter or symbol
<b>Real</b>	A number with a decimal point in it (e.g. 3.14)
<b>Integer</b>	A whole number (e.g. 3)
<b>Boolean</b>	Can either be True or False
<b>String</b>	One or more characters (e.g. Hello)

## Computational Thinking



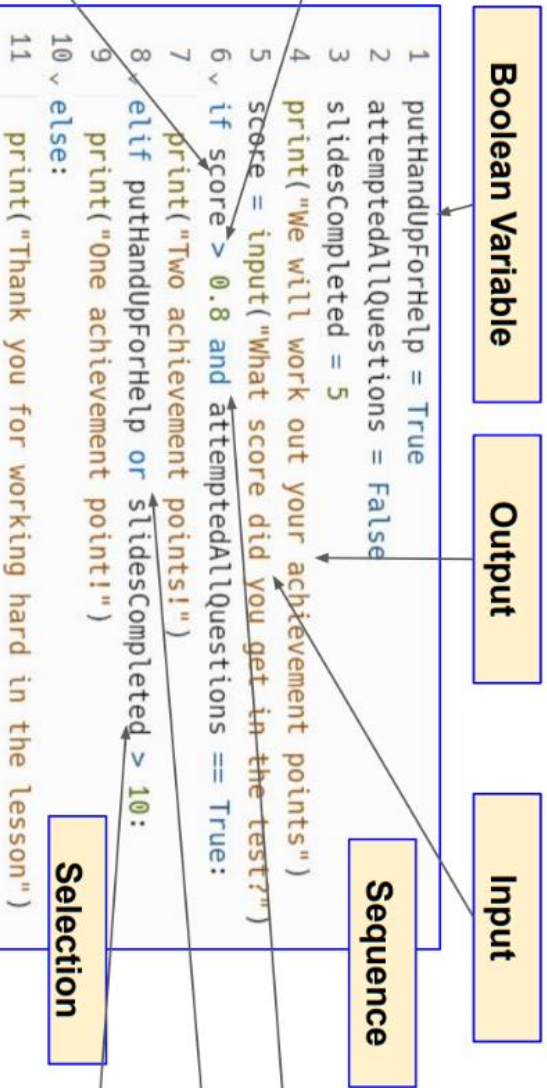
An **Integrated Development Environment (IDE)** is where we write, test and translate our code into binary (machine code) so that the computer system can run the program for us. We write code in Python at school and the IDE we use is replit.com

**TREE** is an easy way to remember the 4 main features of an IDE

<b>Translators</b>	Translate the code to binary (machine code)
<b>Runtime Environment</b>	Used to run and test the program for errors
<b>Editor</b>	Used to write the code
<b>Error Diagnostics</b>	Locate errors and suggest how to fix them



Comparison Operators	
Greater than	>
Less than	<
Greater than or equal to	>=
Less than or equal to	<=
Equal to	==
Not equal to	!=



### Real Number Variable



A syntax error breaks the rules of the programming language

1 Print("Syntax Error - Capital P")

Logic error will cause the result or output of a program to be not what was expected

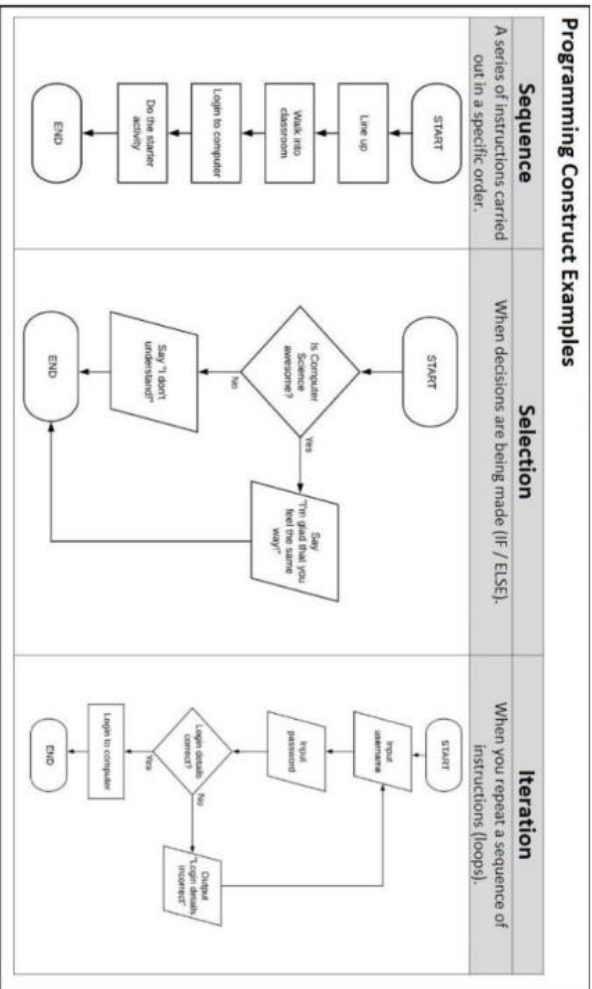
```
attendance = 0
if attendance == 0:
    print("You have 100% attendance!")
```



Boolean Operators	
Both conditions must be True	AND
At least one condition must be True	OR
Must be not True	NOT

### Selection

### Integer Variable





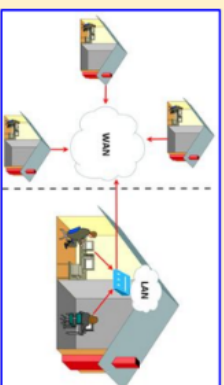
### LANs

1. Stands for **Local Area Network**
2. A LAN is when devices are connected over a **small geographical area**
  - o Examples: School, home
3. You can connect to a LAN using **WiFi** or **Ethernet**



### WANs

1. Stands for **Wide Area Network**
2. A WAN is when networks are connected over a **large geographical area**
  - o Example: The internet
3. You can connect to a WAN through your telephone connection, mobile data (GPRS) or cable/satellite.
4. WANs connect using a **modem**. Nowadays these are built into the **router**.



### WPANs

1. Stands for **Wireless Personal Area Network**
2. A WPAN allows us to **pair** devices together over a short range.
  - o Examples
    - A speaker connected to a phone
    - A smartwatch connected to a smartphone
3. You can connect to a WPAN using bluetooth.



### Typical hardware used to create a LAN.



Ethernet cable



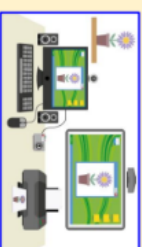
Router



Switch



Wifi extender



Peripherals



Network interface card

### Advantages and disadvantages of different connection types.

	Advantages	Disadvantages
Wifi	Good for connecting <b>portable</b> devices to a LAN.	Slower <b>data transfer speed</b> compared to Ethernet. Limited <b>range</b> (unless you use a wifi extender) Can be <b>hacked</b> by <b>unauthorised users</b>
Ethernet	Faster <b>data transfer speed</b> compared to wifi. Has a <b>range</b> of 100 metres.	Cables are more <b>expensive</b> than using a wifi connection.
GPRS	Can be used on the move. Good for mobile devices such as smartphones.	Mobile data can be <b>expensive</b> - requires a SIM card. Limited/slow connection speed in some locations.
Bluetooth	Up to 7 bluetooth devices can be <b>paired</b> at once.	Can be hacked by <b>unauthorised users</b> The <b>range</b> is quite short.



## Cloud Storage

### What is cloud storage?

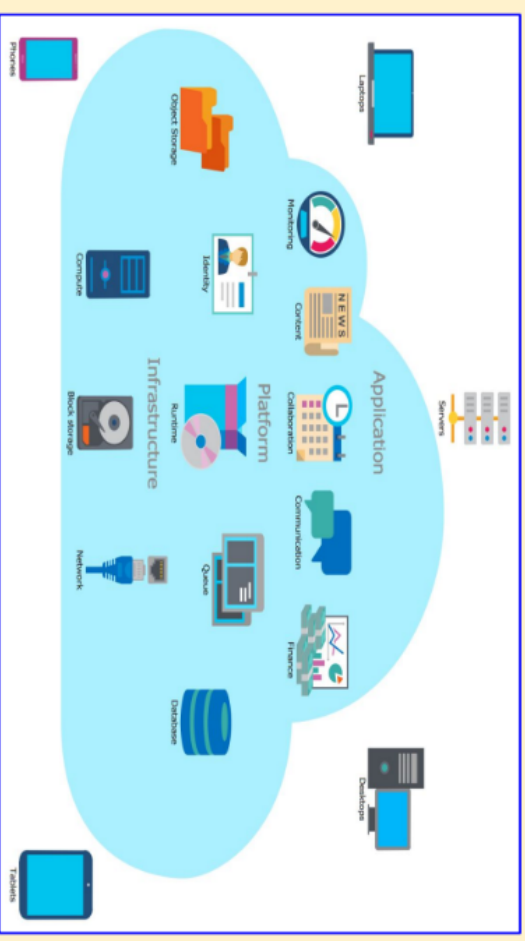
**Cloud storage** is **online storage** of data. Data is **stored remotely** on **web servers**. The web servers are connected to the internet so **data** can be accessed **anywhere you have an internet connection**.

### Advantages of Cloud Storage

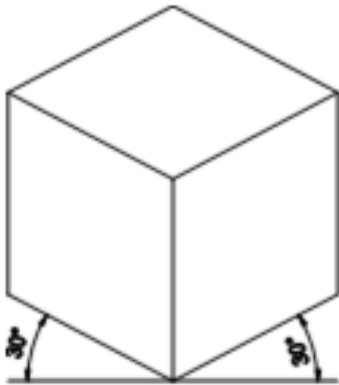
- ✓ Data can be accessed on any device that has an internet connection
- ✓ It is easy to increase the amount of **storage** available
- ✓ **Security** and **backups** are managed by the **host company** (the cloud computing provider)
- ✓ **Data is saved automatically**
- ✓ **Data** is backed up to more than one location
- ✓ There is no need to pay IT staff to manage the **hardware**

### Disadvantages of Cloud Storage

- ✓ You must have an internet connection to access the **stored data**
- ✓ **Cloud storage** can be vulnerable to hacking and you are dependant on the **host company** for providing **security**
- ✓ You are dependant on the **host company** for providing **backups**
- ✓ **Copyright** – the user sometimes loses legal rights to their original material if they store it online.
- ✓ **Additional storage** can be expensive

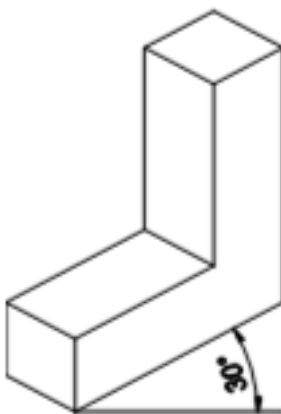


# Isometric Drawing

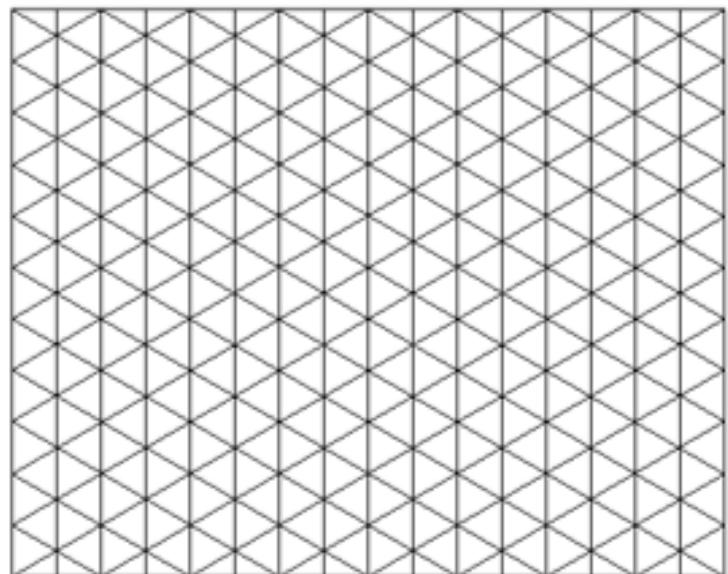


Isometric drawing is way of presenting designs/drawings in three dimensions. The example to the left has been drawn with a 30 degree set square. Designs are always drawn at 30 degrees in isometric projection. In isometric projection all vertical lines on an object remain vertical while all other lines are drawn at 30 degrees to the horizontal. Isometric drawings are usually produced with drawing equipment or on CAD to ensure accuracy. When starting, you can also use Isometric Grid paper to help.

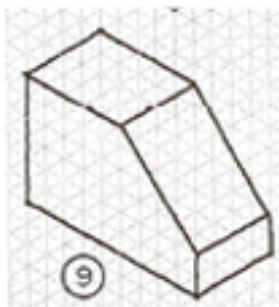
## Isometric Drawing



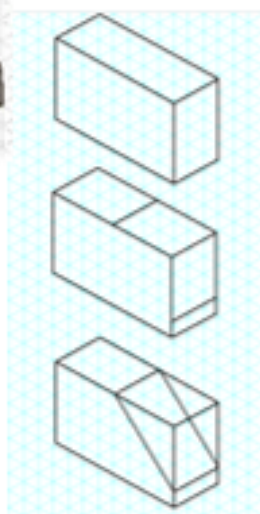
Isometric  
Grid  
Paper



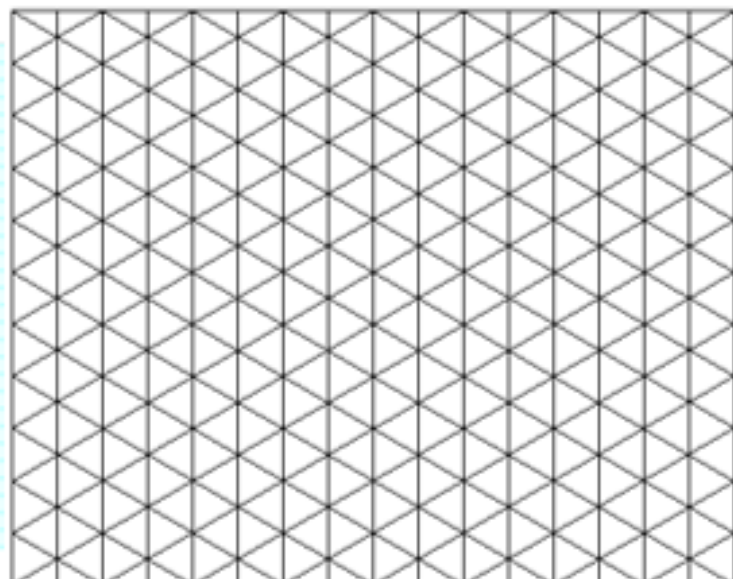
## Horizontal Line



Guide



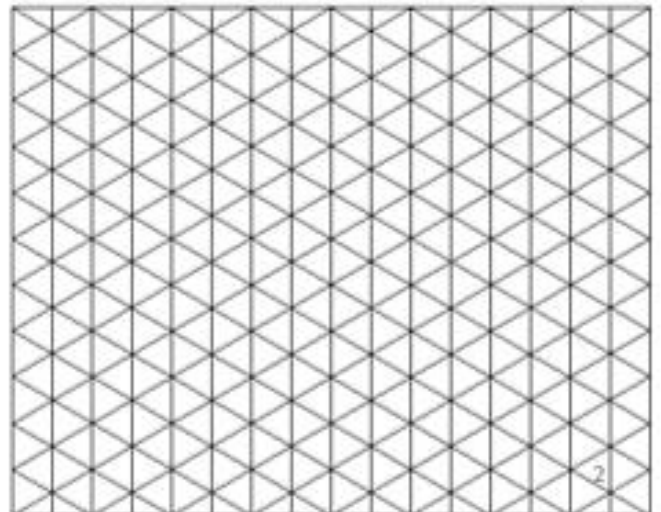
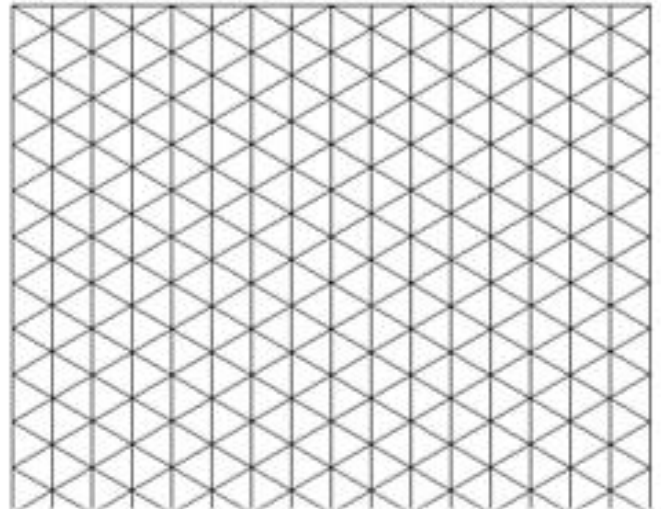
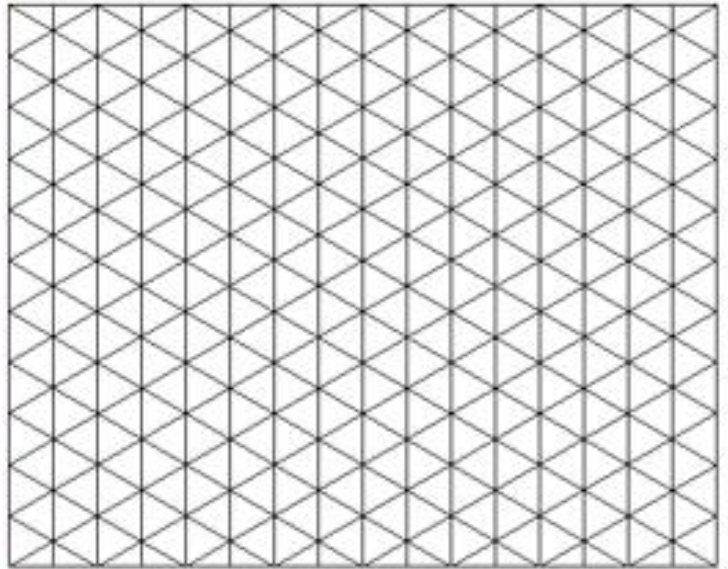
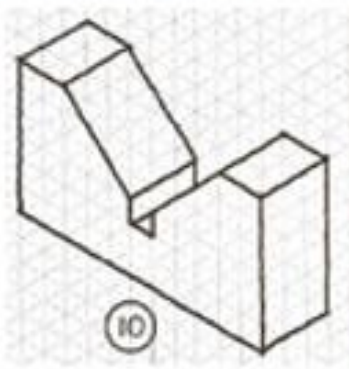
Copy the drawings on to the Grid paper; Use Pencil first, then Ink it over in Pen





# Isometric Drawing

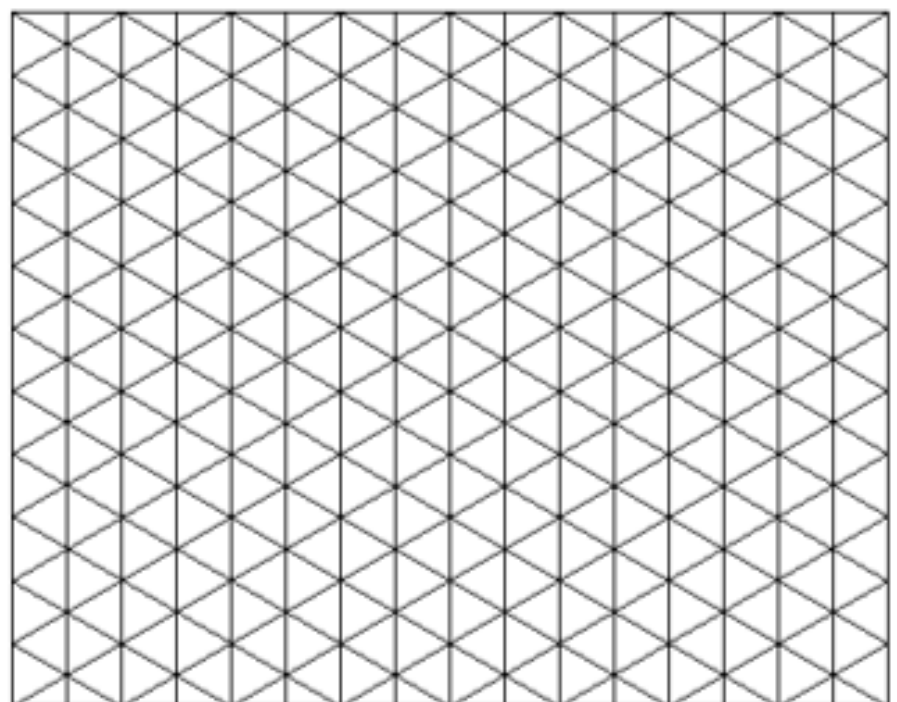
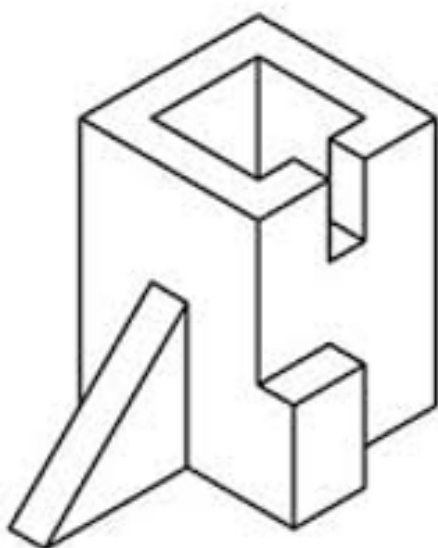
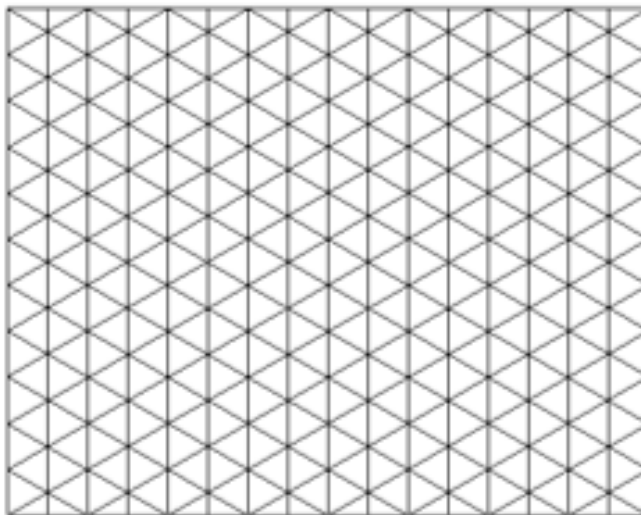
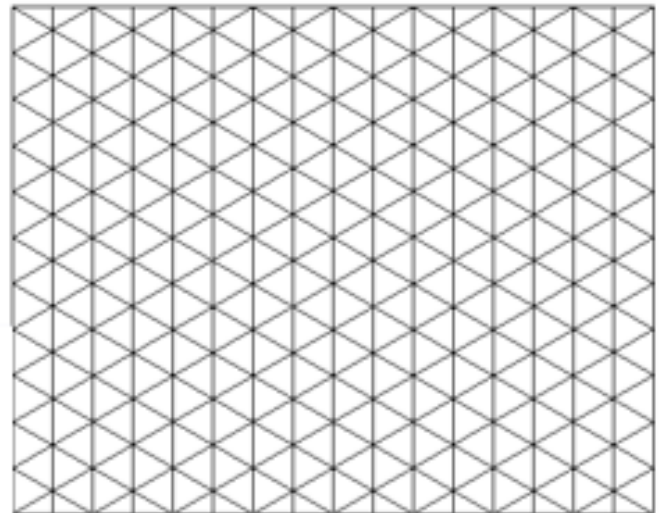
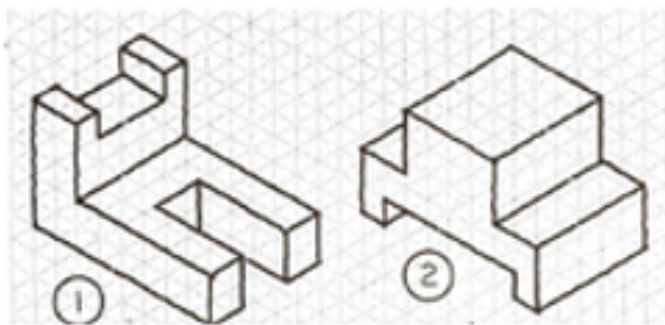
Copy the Isometric drawings of the shapes below in the space provided. Your drawings DO NOT have to be dimensionally accurate BUT should look the same. Remember there are no horizontal lines!





# Isometric Drawing

Copy the Isometric drawings of the shapes below in the space provided. Your drawings DO NOT have to be dimensionally accurate BUT should look the same. Remember there are no horizontal lines!

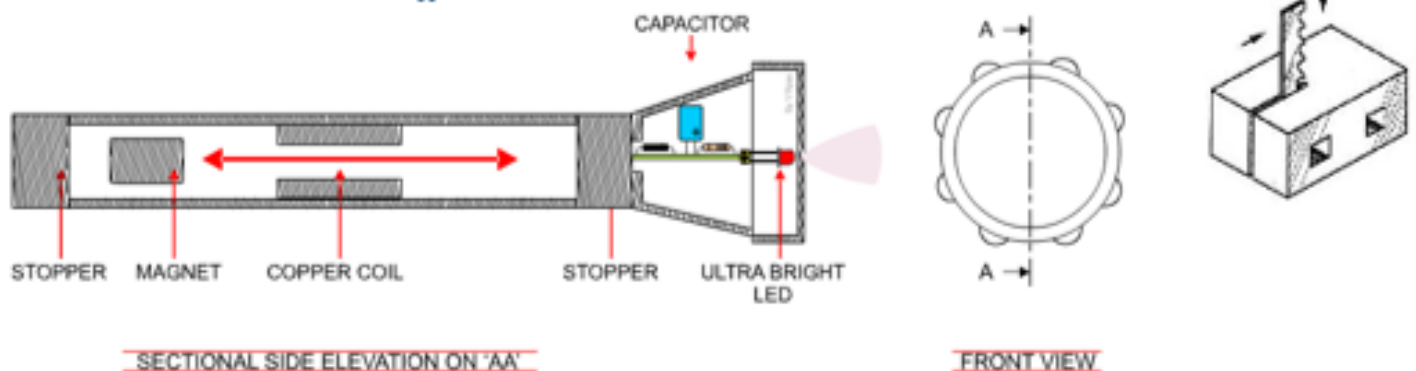


# Section/Cutaway Drawing

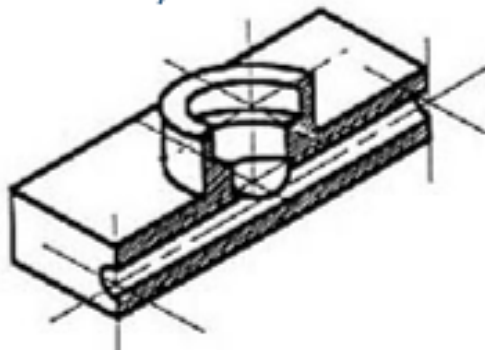
**Section Drawings** show a product as if it had been sliced or sectioned so you can view the interior. (sometimes they are called **cross-sections**.) The position of the imaginary cut is called a **section plane** or **cut plane** and is drawn with long and short dashes.

**Cutaway Drawing** have a similar purpose (to expose the interior of a product) but are drawn in Isometric View. Cutaway Drawings do not have a section/cut plane but have the advantage of being able to show a more realistic and complex view of the interior of a product.

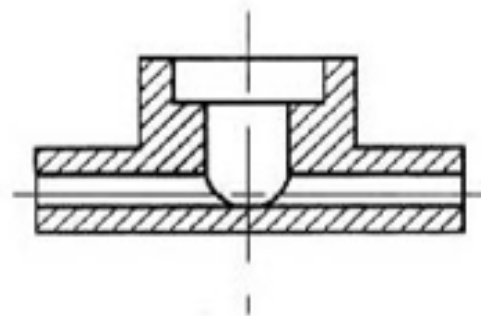
The parts of the product that have been sectioned pt cutaway will show where they have been cut via **Hatching**.



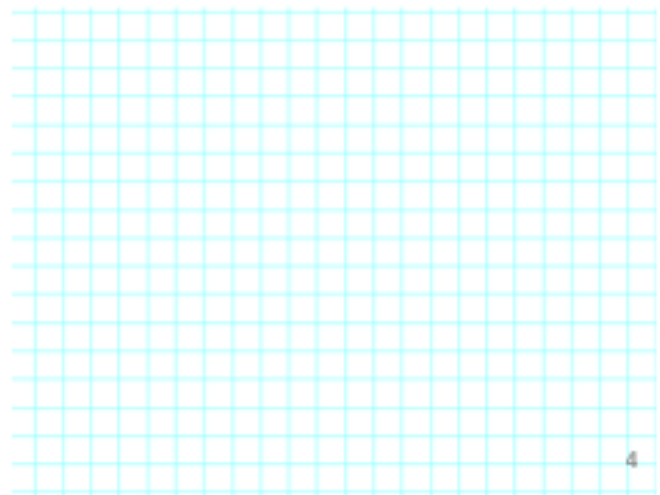
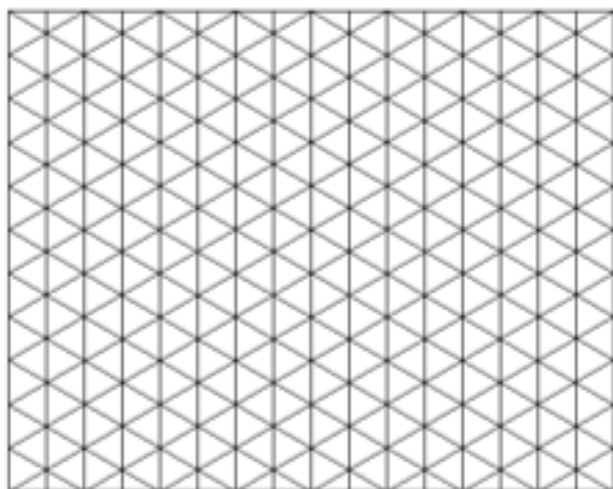
Copy the 2 drawings shown in the blank space below. Your drawings DO NOT have to be dimensionally accurate BUT should look the same



A: Isometric Cutaway



B: Sectional Drawing





# Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Check the label on packaged foods

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturated 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake

Typical values (as sold) per 100g: 697kJ/167kcal

Choose foods lower in fat, salt and sugars

Eat at least 5 portions of a variety of fruit and vegetables every day



Beans, pulses, fish, eggs, meat and other proteins  
Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat

Dairy and alternatives  
Choose lower fat and lower sugar options

Choose unsaturated oils and use in small amounts

Water, lower fat milk, sugar-free drinks including tea and coffee all count.  
Limit fruit juice and/or smoothies to a total of 150ml a day.



Eat less often and in small amounts



Per day 2000kcal



2500kcal = ALL FOOD + ALL DRINKS

## 9.9 French Technology and Media Knowledge Organiser

### **Comparatives** – to express more or less than

... c'est plus...adjective...que - is more...adjective...than

... c'est moins ...adjective ...que - is less...adjective... than

... c'est aussi...adjective...que – is as...adjective...as

#### **For example:**

*Il est plus grand que son frère. (He is taller (more tall) than his brother.)*

*Cette maison est moins grande que notre maison. (This house is smaller (less big) than our house.)*

*Ce chien est aussi grand que mon chat. (This dog is as big as my cat.)*

### **Make a French comparison from good to better or from bad to worse:**

Like in English the words for bad and good are irregular . Good > better (bon > mieux) and bad>worse (mauvais > pire).

#### **For example:**

WhatsApp est mieux que Facebook. WhatsApp a is better than Facebook.)

Snapchat est pire que Twitter. (Snapchat is worse than a Twitter)

### **\*Notice that the adjective always agrees with the first noun**

### **Superlatives** – to express the biggest, the most interesting etc...

... c'est le/la/les plus + adjective – is the most + adjective

...c'est le/la/les moins + adjective - is the least + adjective

#### **For example:**

*La plus intelligente de la classe (the most intelligent in the class)*

*Le moins grand de la famille (the shortest (least tall) in the family)*

3 time frames  
Infinitives  
Time phrases and connectives

Negative constructions  
Opinions and justifications  
Comparatives and superlatives

### **Adjectives** describe nouns e.g. a blue phone.

In French, adjectives normally go after the words they are describing e.g. un portable bleu (a blue mobile phone) and they have to agree with the noun they are describing.

In French, adjectives must agree with the noun (or pronoun) they describe in gender and in number. This means that if the noun an adjective describes is feminine, the adjective must be feminine e.g. une télévision noire (a black television). If that same noun is also plural, the adjective will be feminine AND plural as well e.g. les télévisions noires (black televisions).

### **Opinion phrases**

À mon avis	In my opinion
Je pense que	I think that
Je crois que	I believe that
Je dirais que	I would say that
Personnellement	Personally
Je considère que	I consider that
De mon point de vue	From my point of view
Je le/les trouve	I find it / them
Selon moi	In my opinion
Je trouve que	I find that

### **Time phrases**

Aujourd'hui	Today
Normalement	Normally
Quelquefois	Sometimes
De temps en temps	From time to time
Le weekend	On the weekend
(Deux) fois par semaine	(Twice) a week
Souvent	Often
Toujours	Always
Hier	Yesterday
Avant-hier	The day before yesterday
La semaine dernière	Last week
Le weekend dernier	Last weekend
Le mois dernier	Last month
L'année dernière	Last year
Hier soir	Last night
Il y a (deux jours/ans)	(Two days/years) ago
Demain	Tomorrow
À l'avenir	In the future
Le weekend prochain	Next weekend
La semaine prochaine	Next week
L'année prochaine	Next year

### **Connectives**

et	and
mais	but
parce que/car	because
cependant/pourtant	however
en plus	furthermore
par exemple	for example
ensuite	then
finalement	finally
néanmoins	nevertheless



### Verbs and the present tense in French

#### The infinitive

When you look up a verb in the dictionary, you find its original, unchanged form which is called the **infinitive** (manger, boire, jouer, visiter, habiter, aller etc.). The infinitive ends in **-re, -er** or **-ir**.

#### Forming the present tense in French

Take off the last 2 letters of the infinitive (**-re, -er** or **-ir**) and add the following endings depending on the pronoun:

\*Important! There are some key irregulars to learn which don't follow this pattern – aller (as shown here), être, avoir and faire are really important!

	RE verb	ER verb	IR verb
Je (I)	-s	-e	-s
tu (you)	-s	-es	-s
il/elle (he/she)		-e	-t
nous (we)	-ons	-ons	-issons
vous (you all)	-ez	-ez	-issez
ils/elles (they)	-ent	-ent	-issent

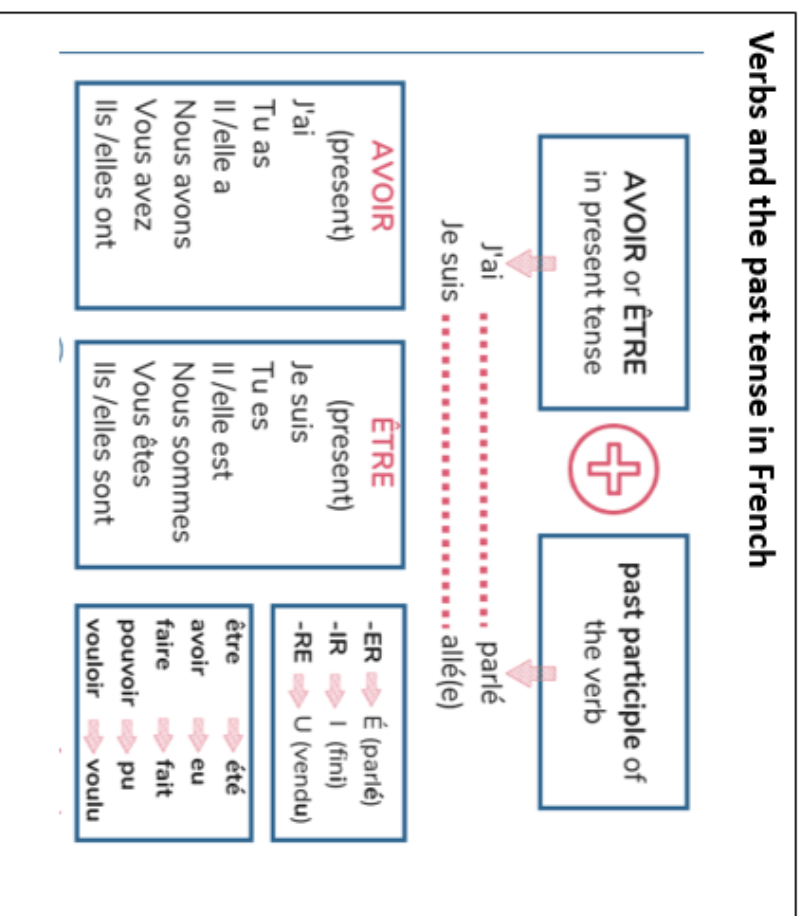
### Verbs and the past tense in French

**Verbs and the near future tense in French**  
You can talk about the future by using the **near future** tense.  
Use part of the verb ALLER + a + the infinitive to say what you are **going** to do.

Ce soir je vais jouer au tennis. *This evening I am going to play tennis.*

Demain Paul va a faire un gateau. *Tomorrow Paul is going to make a cake.*

Aller (to go)	
Je vais	I am going
Tu vas	You are going
Il/elle va	He /she/one is going
Nous allons	We are going
Vous allez	You (lot) are going
Ils/elles vont	They are going



## 9.10 Leisure and healthy living

3 time frames  
Infinitives  
Time phrases

opinions  
justifications



### 1. Expressing FUTURE intentions :

J'ai l'intention de + infinitive (I plan to/ I intend to ...)

Je voudrais + infinitive (I would like to...)

### 2. Using infinitives after j'aime/je m'aime pas/je déteste/je préfère :

You can also use an infinitive after opinion verbs such as aimer, détester and préférer. They are usually translated with a **gerund** (a verb ending with -ing) in English:

J'aime habiter à Newcastle - I like living in Newcastle.

Tu préfères jouer au foot ou au tennis? - Do you prefer playing football or tennis?

Je déteste boire du café parce que c'est dégoûtant – She hates drinking coffee because it's disgusting.

### 3. Opinions

J'aime - I like

J'aime beaucoup- I like **a lot**

Je n'aime pas beaucoup- I don't like

**much**

Je préfère – I prefer

Je déteste - I hate

Je ne peux pas supporter - I can't stand

### 4. Justification

**Parce que** - because

**Ainsi** – therefore/so

**Par conséquent** - consequently

### 5. Comparisons

**Plus...que** –more...than

**Moins...que** - less...than

**Aussi...que** – as...as

### 6. Superlative

**Le/la plus** – the most

**Le/la moins** – the least

**Le/la mieux** – the best

**Le/la pire** – the worse

### 7. Time phrases

**Normalement** - normally

**D'habitude** - usually

**Généralement** - generally

**Quelquefois** – sometimes

**Ensuite** – next

**Rarement** - rarely

**Le weekend prochain**– next weekend

**La semaine prochaine** - next week

**Le weekend dernier** - last weekend

**Le mois dernier** - last month

**L'été dernière** - last summer

**Pendant le confinement** - during lockdown

## 9.9 Spanish Technology and Media Knowledge Organiser

3 time frames  
Infinitives  
Time phrases and connectives

Negative constructions  
Opinions and justifications  
Comparatives and superlatives

### **Comparatives** – to express more or less than

... es más...adjective...que - is more...adjective...than  
... es menos ...adjective ...que - is less...adjective... than  
... es tan...adjective...como – is as...adjective...as

#### **For example:**

Es más grande que su hermano. (He is taller (more tall) than his brother.)

Esta casa es menos grande que nuestra casa. (This house is smaller (less big) than our house.)

Este perro es tan grande como mi gato. (This dog is as big as my cat).

**Make a Spanish comparison from good to better or from bad to worse:**

Like in English the words for bad and good are irregular . Good > better (bueno > mejor) and bad>worse (malo > peor).

#### **For example:**

Esta pizza es mejor que la otra. (This pizza is better than that other one.)

La gripe es peor que un resfriado. (Flu is worse than a cold)

**\*Notice that the adjective always agrees with the first noun**

**Superlatives** – to express the biggest, the most interesting etc...

... est el/la/los/las más + adjective – is the most + adjective  
...est el/la/los/las menos + adjective - is the least + adjective

#### **For example:**

La más inteligente de la clase (the most intelligent in the class)

El menos grande de la familia (the shortest (least tall) in the family)

### **Adjectives** describe nouns e.g. a blue phone.

In Spanish, adjectives normally go after the words they are describing e.g. un móvil azul (a blue mobile phone) and they have to agree with the noun they are describing.

In Spanish, adjectives must agree with the noun (or pronoun) they describe in gender and in number. This means that if the noun an adjective describes is feminine, the adjective must be feminine e.g. una televisión negra (a black television). If that same noun is also plural, the adjective will be feminine AND plural as well e.g. las televisiones negras (black televisions).

### **Opinion phrases**

En mi opinión	In my opinion
Pienso que	I think that
Creo que	I believe that
Diría que	I would say that
Personalmente	Personally
A mi juicio	In my opinion
Considero que	I consider that
Desde mi punto de vista	From my point of view
Lo / Las encuentro	I find it / them

### **Time phrases**

Hoy	Today
Normalmente	Normally
De vez en cuando	From time to time
A veces	Sometimes
El fin de semana	On the weekend
(Dos) veces por semana	(Twice) a week
A menudo	Often
Siempre	Always
Ayer	Yesterday
Anteayer	The day before yesterday
La semana pasada	Last week
El fin de semana pasado	Last weekend
El mes/año pasado	Last month/year
Anoche	Last night
Hace (dos días/años)	(Two days/years) ago
Mañana	Tomorrow
En el futuro	In the future
El fin de semana próximo	Next weekend
La semana próxima	Next week
El año próximo	Next year

### **Connectives**

y	and
pero	but
porque	because
sin embargo	however
además	furthermore
por ejemplo	for example
luego	then
finalmente	finally
no obstante	nevertheless



### Verbs and the present tense in Spanish

#### The infinitive

When you look up a verb in the dictionary, you find its original, unchanged form which is called the **infinitive** (comer, beber, jugar, visitar, vivir, ir etc.).

The infinitive ends in **-ar, -er** or **-ir**.

#### Forming the present tense in Spanish

Take off the last 2 letters of the infinitive (**-ar, -er** or **-ir**) and add the following endings depending on the pronoun:

\*Important! There are some key irregulars to learn which don't follow this pattern – **ir** (as shown here), **ser**, **tener** and **hacer** are really important!

	AR verb	ER verb	IR verb
yo (I)	-o	-o	-o
tu (you)	-as	-es	-es
él/ella (he/she)	-a	-e	-e
nosotros/as (we)	-amos	-emos	-imos
vosotros/as (you all)	-áis	-éis	-ís
ellos/ellas (they)	-an	-en	-en

### Verbs and the near future tense in Spanish

You can talk about the **future** by using the **near future** tense.

Use part of the verb **IR** + **a** + the infinitive to say what you are **going** to do.

Este tarde **voy a jugar** al tenis. *This evening I am going to play tennis.*

Mañana Paul **va a hacer** un pastel. *Tomorrow Paul is going to make a cake.*

IR (to go)	
VOY	I am going
VAS	You are going
VA	He/she/one is going
VAMOS	We are going
VAIS	You (lot) are going
VAN	They are going

### Verbs and the past tense in Spanish

The **preterite** is the past tense used in Spanish to describe a completed action at a specific time in the past (e.g. ayer (yesterday), el año pasado (last year)). For regular we take off **-ar, -er** – **ir** and add the below endings :

	-AR	-ER / -IR
I	é	í
You (sg)	aste	iste
He/she/it	ó	ió
We	amos	imos
You (pl)	asteis	isteis
They	aron	ieron

#### Examples:

Tomar = to take  
To form "I took"

~~TOMAR~~ > tom > tomé

Hablar = to speak  
To form "she spoke"

~~HABLAR~~ > habl > habló

## 9.10 Leisure and healthy living

3 time frames  
Infinitives  
Time phrases

opinions  
justifications

### 1. Expressing **FUTURE intentions** :

Tengo la intención de + infinitive (I plan to/ I intend to ...)

Me gustaría + infinitive (I would like to...)

### 2. Using infinitives after **me gusta/no me gusta/odiar/preferir** :

You can also use an infinitive after opinion verbs such as *aimer*, *odiar* and *preferir*. They are usually translated with a **gerund** (a verb ending with -ing) in English:

Me gusta *vivir* à Newcastle - I like living in Newcastle.

Preferes *jugar* al fútbol o al tenis? - Do you prefer playing football or tennis?

Odio *beber* café porque es asqueroso – She hates drinking coffee because it's disgusting.

### 3. Opinions

Me gusta(n) - I like

Me gusta(n) **mucho** - I like a lot

No me gusta(n) **mucho** - I don't like

**much**

Prefero – I prefer

Odio - I hate

No suporto - I can't stand

### 4. Justification

**Porque** - because

**Por lo tanto** – therefore/so

**Por consiguiente**- consequently

### 5. Comparisons

**Más...que** –more...than

**Menos...que** - less...than

**Tan...como** – as...as

### 6. Superlative

**El/la más** – the most

**El/la menos** – the least

**El/la major** – the best

**El/la peor** – the worse

### 7. Time phrases

**Normalmente** - normally

**Usualmente** - usually

**Generalmente** - generally

**De vez en cuando/a veces** – sometimes

**Luego** – next

**Raramente** - rarely

**El fin de semana que viene**– next weekend

**La semana que viene**- next week

**El fin de semana pasado** - last weekend

**El mes pasado** - last month

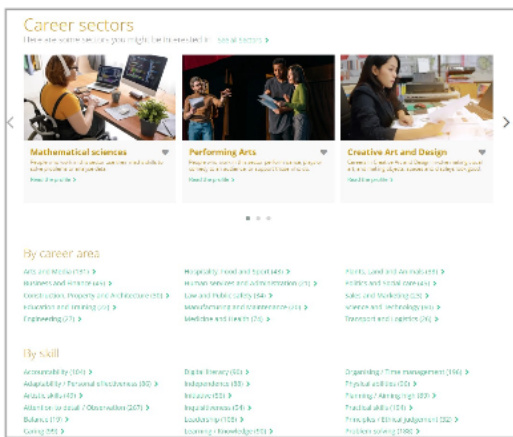
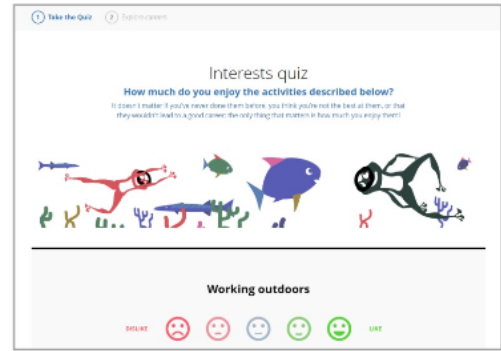
**El verano pasado**- last summer

**Durante la cuarentena**- during lockdown

# CAREERS AT HPA

Our Careers guidance and provision at Hans Price offers a wide range of experiences and opportunities to inform and develop aspirations for the future. In addition to a careers featuring in our SPACE curriculum and weaving through all subjects taught at Hans Price, all students use UniFrog to support their careers provision and their planning for Post-16 and beyond.

Unifrog is the universal destinations platform and is designed to support learners in making the most informed decisions about their futures. It has a range of tools that are suitable for all year groups. Each student has their own account where they can explore all the career and next step options available to them and find information on everything from managing their workload to writing a winning CV. Students have access to a wide variety of video and written content, and interactive quizzes and tests, information about careers and the local labour market and emerging industries.



Students can access Unifrog through the LCF Student Navigator page or searching for Unifrog online. Students initially sign up to the platform by clicking a link in their welcome email, where they create a password and can begin using the platform. They sign in to Unifrog using their Hans Price email address and password and they can do so from any computer, tablet, or smartphone. We would encourage you to use the platform with your child so you can support them through the process of deciding their next step.

You can also have your own Unifrog account. You'll be able to research careers, attend webinars delivered by employers and universities to learn more about their opportunities, and compare pathways so you can support your child in making an informed decision about their next steps. The sign up code you need is: **HPAMParents** and you can sign up here: [www.unifrog.org/code](http://www.unifrog.org/code). You can also sign up to Unifrog's parent/carer newsletter when you first sign



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Monday 27 November @ 16:30 UK time - 45 mins - [sign up](#) or [Share](#)





# PERFORMING ARTS OPPORTUNITIES



## **SCHOOL MUSICAL:**

SCHOOL MUSICAL IS IN JULY - REHEARSALS ARE TUESDAY & WEDNESDAY AFTER SCHOOL READY FOR THE SHOW IN JULY.

## **DANCE SHOW:**

YOU CAN AUDITION FOR THE DANCE SHOW IN APRIL. AUDITIONS ARE USUALLY 3 WEEKS BEFORE THE SHOW.

## **MUSIC SHOW:**

YOU CAN AUDITION FOR THE MUSIC SHOW IN FEBRUARY. AUDITIONS ARE USUALLY 3 WEEKS BEFORE THE SHOW.

PLEASE SEE YOUR MUSIC TEACHER FOR A LIST OF UP TO DATE CLUBS.

## **DANCE CLUB:**

DANCE CLUB WITH ANGELS DANCE ACADEMY IS EVERY FRIDAY LUNCH IN THE DANCE STUDIO.

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Before School</b>			<b>Touch Rugby</b> 7.15 - 8am Years 9&10 Astro		<b>Just Dance</b> 8 - 8.30am All students Dance Studio
<b>Lunch</b>	<b>Futsal</b> Year 7 Sports Hall	<b>Futsal</b> Year 11 Sports Hall	<b>I.S Club</b> Years 7, 8 & 9 G7	<b>Chess Club</b> All students F6	<b>Dance Club</b> All Students Dance studio
<b>After School</b>	<b>I.S Club</b> Years 7, 8 & 9 G7	<b>Hero Club</b> All Students G2	<b>Futsal</b> Year 9 Sports Hall	<b>I.S Club</b> Years 7, 8 & 9 G7	<b>I.S Club</b> Years 7, 8 & 9 G7
		<b>I.S Club</b> Years 7, 8 & 9 G7	<b>Film Club</b> All years Library	<b>Futsal</b> Year 10 Sports Hall	<b>Futsal</b> Year 8 Sports Hall
		<b>Girls Football</b> All years Outside Changing Rooms	<b>Hula Hoop Club</b> All years Dance Studio	<b>Football</b> Years 7&8 Outside Changing Rooms	
		<b>Cheerleading</b> All Students Inside Changing Rooms	<b>I.S Club</b> Years 7, 8 & 9 LS3	<b>Basketball</b> All students Inside Changing Rooms	<b>I.S Club</b> Years 7, 8 & 9 LS3
		<b>Football</b> Years 9&10 Outside Changing Rooms		<b>Netball</b> Years 7, 8 & 9 Inside Changing Rooms	<b>I.S Club</b> Years 7, 8 & 9 LS3
		<b>Rugby</b> All Students Outside Changing Rooms			<b>Parkour</b> 5.45-6.45pm Externally delivered sessions free to CLF/HPA students G3
		<b>Drama Club</b> All Students Drama Studio (A6)			
		<b>I.S Club</b> Years 7, 8 & 9 LS3			

For all lunchtime sports clubs please bring trainers and remove the and blazer

**Enrichment Timetable Term 1**